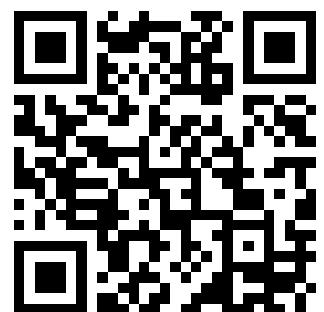

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Geology

GRAPHITE

VOL. XV.

JANUARY, 1913.

No. 1.

Issued in the interest of Dixon's Graphite Productions, and for the purpose of establishing a better understanding in regard to the different forms of Graphite and their respective uses.

PROTECTIVE PAINT COATINGS

Protective paint coatings have been likened to the cuticle of the human body, protecting the tissues from external influences. In the matter of decorative paint, durability should be considered, but the cost is not always a matter of serious consideration, as sometimes we like to change the ornamental effects, and so change our colors as we change our fashions.

In the matter, however, of iron and steel construction work as we find it in bridges, etc., a protective paint merits all the consideration that can be given it.

No thoughtful person will ignore the very great importance of the outer protective film which is applied for the purpose of preserving a bridge or chimney stack or railroad rolling stock.

This applies equally well whether the structure be of steel or wood or stone or cement, but from the article from which we are quoting and which appeared in the *Engineering Magazine* for December, 1912, we shall confine our attention to iron and steel.

It is evident that the cost of maintenance of any iron or steel structure will enormously increase if the protective paint coating deteriorates rapidly and has to be renewed within a comparatively short time. The cost of repainting is always great, and for a term of years may become enormous—hence the necessity for using a protective coating which will yield high "durability figures."

The need for protecting iron and steel from rusting and ultimate deterioration and destruction, depends on even better and more scientific grounds than are at first sight apparent. A protective paint should prevent or at least economize waste—waste of the structural metals—waste of the fuel and materials used in producing these metals—waste of time—waste of money. As a rule neither the engineer or the architect is a trained chemist or analyst, still less is he a paint technologist, and the question therefore arises how can the engineer differentiate between the innumerable articles which compete for his patronage?

In the midst of all discussion and conflict of opinion, it would seem as though it were better for the engineer to depend upon the reputation and standing of the manufacturer, and the reputation and record of the paint itself, where it has

been exposed to conditions similar to what the engineer has in mind for his particular work.

There are some rules, however, that might well be observed by the engineer in connection with the surface on which the protective paint is to be applied.

(1) The surface should be perfectly clean and free from moisture, greasy matter, rust and mill scale. No pains should be spared to insure a perfectly clean, dry, metallic surface.

(2) All minute holes, cracks, fissures between plates, poles and the like should be filled with a suitable "filling" or "stopping" before painting is proceeded with. The condition of "metal-to-metal" is particularly objectionable as local galvanic action is thereby excited and this excites corrosion. A protective paint film to be effective must be continuous for the whole surface, and this result cannot be secured unless the said surface is made perfectly solid and continuous.

The article "Painting Iron and Steel" in the *Engineering Magazine* mentioned above, in its entirety, is well worth careful reading. From our own reading of this article, we are led to believe that Dixon's Silica-Graphite Paint more nearly fulfills the requirements of a final protective coating under all varying conditions, than any other protective paint in the market, and the records which we have acquired during the past fifty years would seem to prove it.

A NEW USE FOR DIXON CRAYONS

An apparatus has been invented by means of which every time a hen lays an egg she leaves behind her an autograph, so that her owner can know just what number of eggs she has delivered. The apparatus is described in the *Scientific American*. The device is so constructed that after the hen has laid an egg she is obliged to crawl under an inner gate. This is no hardship for the fowl, which no doubt has been educated to crawl under the fence. But in the squatting so as to crawl under the gate, the hen is obliged to bring a crayon, strapped to her leg, into contact with a piece of paper on the inclined board, thus leaving her autograph after passing out of the nest.

To distinguish between hens, each is provided with an individual color, and if there are not colors enough to go round, combinations of colors are provided, for a hen may wear a crayon on each leg. The crayon holders are so light and fit so well that the hen does not notice them any more than one notices the ring on his finger. It has been found that the crayons last six to eight weeks without any attention whatever.

ESTABLISHED 1827



INCORPORATED 1868



JOSEPH DIXON CRUCIBLE CO.

JERSEY CITY, N. J., U. S. A.

**Miners, Importers and Manufacturers of Graphite,
Plumbago, Black Lead.**

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COMPETITION GONE MAD

The *New York Herald*, in commenting on the newspaper situation, makes a statement that notwithstanding the large circulation of the *New York World*, morning and evening at one cent a copy, it was shown that the average net profits for the last four years were only \$556,000, and that in the year of the Spanish-American War, owing to extraordinary expenditures, the *World* found itself facing a deficit of \$43,000. The *Herald* says the increased cost of white paper will force the *World* to pay annually \$350,000 more than it has been paying and that the situation is a serious one for newspaper publishers who sell their papers to readers at one cent a copy.

The *Editor and Publisher* adds that the time will come when the loss on the sales of the manufactured product at one cent a copy will more than equal the net receipts from advertising,

unless advertising rates are advanced to a much higher point than they stand at the present time, and considers it a case of competition gone mad.

The Dixon Company has always considered itself entitled to a fair margin of profit, and although the Dixon Company were the first to manufacture and market a graphite paint or rather a silica-graphite paint, it has never attempted to meet the competition of manufacturers who have put upon the market the many cheap graphite paints that are now to be found for the asking.

As miners and refiners of graphite, the Dixon Company sells graphite of whatever quality required to other manufacturers, but it reserves for its own particular paint pigment the now celebrated silica-graphite mined at the company's mines at Ticonderoga, N. Y.

It is the same in the matter of graphite lubricants. The Dixon Company uses its choicest flake graphite for all of its well known graphite lubricants and never would consider the using of cheap graphites that are used in products like foundry facings, etc., nor would it use even higher grades of graphite than are used in foundry facings. To many people graphite is simply graphite, but to those who know and are experienced, there is a proper graphite for every purpose, the same as there are different grades and qualities of iron products. There is the iron used in the structures of buildings and the iron which is refined into fine tool steel.

EASTER comes in 1913 on March 23—the earliest Easter in ninety-five years.

It does not occur in March again until 1918, when it will come on March 31.

CURES TROUBLE TWENTY-FIVE YEARS AFTERWARDS

BUFFALO, N. Y., Nov. 6, 1912.

*Joseph Dixon Crucible Company,
Jersey City, N. J.*

GENTLEMEN:—Our engineer called the attention of the writer to a matter which probably would be of interest to you. He stated that he had been having some trouble with the bearings on his engine and ran across an old grease cup which he had had in his engine room some twenty-five years. In this grease cup was a quantity of Dixon Machine Grease, which had probably been there about the same length of time. After putting the cup on his engine and lubricating the bearings with the grease he had no further trouble and desires us to procure for him a ten or twenty pound can of this grease. Kindly consider this an order for it and send to us as quickly as possible.

Yours truly,

BUFFALO SCALE COMPANY,

F. A. AVERY, Secy.

AMERICAN AS SPOKEN

You may have seen a sword fish; a pig iron; a biscuit box; a cake walk; a jelly roll; a chimney sweep; a garden fence and many similar things, but you never saw a fire escape when placed beneath a coat of Dixon's Silica-Graphite Paint.



RITZ-CARLTON HOTEL, PHILADELPHIA

Philadelphia is not a wicked city and it does not require Thor-like guardians of the peace to patrol its busy streets as might be supposed after a cursory glance at our illustration.

Though Broad and Walnut Streets is a particularly active corner of the Quaker City, this civil war recruit is unable to mingle with the constantly passing pedestrians. He remains upon his pedestal to inspire patriotism among the descendants of those who fought to clarify a nation's principles.

In the center of this odd example of the photographer's art, the Ritz-Carlton Hotel rears its proud exterior high in the air. The building of this structure was financed by the well known P. A. B. Widener, and the hotel management is the same under which the Ritz-Carlton Hotel of New York is run. The success of the Ritz-Carlton in Philadelphia, now so apparent, was assured from the beginning, when influential society people interested themselves in the venture and subscribed liberally to the stock of the management.

The structure, some idea of the beauty of which may be gained from our illustration showing the steel work, was de-

signed by Mr. Horace Trumbauer, architect, Philadelphia, and erected by John I. Bland & Company at a cost of \$250,000. This amount, however, represents but a small part of the total expenditure, for it is said that over a million dollars were spent upon interior decorations. The general contractors were James G. Doak & Company.

Between 1,200 and 1,700 tons of steel work were used for the superstructure of the Ritz-Carlton Hotel Building, all of which was fabricated and painted with a shop coat of Dixon's Silica-Graphite Paint by the American Bridge Company. A field coat of Dixon's Olive Green was applied by the John Cronis Nestopoulos Company.

The Ritz-Carlton Hotel of New York, as well as many other prominent hotel buildings throughout the country, is protected with Dixon's Paint. No other paint resists the ravages of time so well as the "ONE QUALITY ONLY" paint. It is made with pigments that offer natural qualities of resistance.

"A PESSIMIST is one who, when given the choice of two evils, cheerfully chooses both."



"Terrible Teddy" Tetzlaff, Holder of the Worlds Road Racing Record. Winner of the Free-For-All Road Race at Santa Monica, May 4, 1912, Winner of Free-For-All Race and the Heavy-Car Road Race at Tacoma, July 5 and 6, 1912

A SUMMARY OF THE AUTOMOBILE RACES OF 1912

There is scarcely a stationary or locomotive engineer who neither knows about or has used Dixon's Flake Graphite. Although many have decided preferences as to which oil or grease serves them best, practically all engineers acknowledge the indispensability of the marvelous product mined at Ticonderoga, N. Y.

The fight for recognition and the ultimate triumph of Dixon's Flake Graphite in fields already occupied by well known and well established concerns, was not so much against the products of these concerns as it was against the prejudice which existed in the minds of those who could not realize that a new and wonderful principle had come to revolutionize the science of lubrication.

Little by little, however, opportunities came. Often the introduction of Dixon's Flake Graphite was gained through the failure of desperate or disgusted engineers, who in spite of careful attention could not overcome the frequent, irritating and expensive delays caused by overheated bearings and seizures of one kind or another.

It should be a pleasing remembrance to locomotive engineers to know that it was largely through their own use and because they bought and paid for Dixon's Flake Graphite out of their own pocket, that the railroads finally and officially

recognized and adopted that which they (the engineers) had proved to be a necessity.

Thus the introduction of Dixon's Flake Graphite extended gradually, until its use became as general on the farm machinery of the West and in the lumber camps of the North, as it was in the great textile mills of the East and the sugar and cotton mills of the South. And, like Alexander, it sighed for more worlds to conquer.

The advent of the automobile was the signal for a number of manufacturers to market specially prepared oils and greases. Soon after the permanency of the automobile had been established, the market was flooded with trade-marked names, each identifying a particular brand of lubricant with which some manufacturer, by getting an early start, hoped to eliminate competition.

But the automobile industry grew, however, far beyond all expectations. Racing became popular and later, the motor truck and motor fire engines joined the successful war upon the horse and the oil and grease manufacturers thrived upon a field big enough for all.

As the demand for automobiles increased, the designers and others responsible for the mechanical perfection of the car, progressed as rapidly in their own particular work, and it was not long before the same discovery was made that had startled the railroads with their powerful super-heated steam engines, and machinists who operated modern, heavy, high



"Hughie" Hughes, Winner of the Aurora Trophy Race at Elgin, August 30, 1912, and Winner of Second Place in the Vanderbilt Cup Race at Milwaukee, October 2, 1912

speed and complicated machines—the automobile had outgrown the limited lubricating efficiency of oil and plain grease.

The Dixon Company had for some years been studying the field and had produced a number of lubricants, with its celebrated Ticonderoga Flake Graphite as the basic ingredient, that had slowly but surely found favor not only among owners, but with many of the manufacturers. Especially did the manufacturers of motor fire truck apparatus appreciate the service given by lubricants which not only remained absolutely unaffected at all temperatures, but possessed a peculiar affinity for metal, and after having once come in contact with a bearing surface refused to become thrown off.

Racing drivers soon began to hear of the remarkable results obtained by manufacturers who employed Dixon's Graphite Lubricants for both testing purposes and to fill stock cars. Racing is the greatest test of the automobile and its contents that has yet been devised. The driver cannot afford to take chances. Not only his reputation but his life is at stake—for this reason he is always experimenting to find the best. Year after year the power and speed of the car has increased until today the speed of the car is limited only by the efficiency of tires and lubricants. Dixon's Graphite has solved the problem of lubrication and we believe that it will also partially solve the tire question, for it is a known fact that if fine flake graphite is placed between the tube and shoe, it will eliminate friction and prevent blow-outs.

One day out in California last April, a stranger who visited the big motordrome located near Playa del Rey, was startled to find a solitary racing car and driver tearing around the course at such a terrific pace that it literally burned the tires with which the wheels of his car were equipped. Every now and then he was obliged to adjust a new tire. The stranger observed that the solitary driver was keeping an account of how long each tire lasted. Tires of several makes were found about, either new or ripped or burned and unfit for further use. This solitary driver the stranger was told, was no other than "Terrible Teddy." Thus far enlightened, the stranger was able to supply the surname of Tetzlaff. Later on he discovered the reason for the singular behavior of the terrible one, for Tetzlaff himself explained that he was experimenting with the tires which a number of manufacturers had sent him to determine which were worthy of use in the coming Santa Monica Road Races.

This method of selection, or process of elimination, is characteristic of the preliminary work of Tetzlaff ever since he began his career as a racing driver. He followed the same course in his selection of lubricants and under the circumstances it was a matter of pride with the Dixon Company that Tetzlaff wrote: "After experimenting for five days with all of the leading makes of greases in my transmission and wheels, I have found that my gear box still heated up with them all. The test to which they were put was too severe. I found that



Harry Speed Endicott, (note his "Middle" Name), Winner of the Wisconsin Trophy Race at Milwaukee, October 4, 1912, and Winner of the Jencks Trophy Race at Elgin, August 30, 1912. Endicott also won Several Events at Galveston Beach Races, August 8-10, 1912

in using Dixon's Graphite Grease it eliminated all heating and was the only grease that would stand up. I cannot recommend it too highly and attribute part of my success to the use of this grease."

It is of course a matter of record that at Santa Monica last May, in the Free-For-All-Race, Tetzlaff raised the world's road racing record from 74.63 miles per hour to 78.72 miles per hour and achieved both fame for himself and for the Fiat Car. In this race Tetzlaff was pitted against such drivers as Bruce-Brown, Bragg, Oldfield, Dingley, Cooper and Lewis. It is interesting to note that the majority of these drivers also used Dixon's Automobile Lubricants and that George Joerimann's Maxwell Car, which won the light car event at Santa Monica, was also equipped with the same lubricants. After winning the race, Joerimann wrote that he congratulated the Dixon Company upon the very good lubricants that they were putting upon the market.

Two months later, at Tacoma, in the Montmara Festo Road Races, Teddy Tetzlaff again proved that his ability to shatter the world's record was not accidental. Tetzlaff won both of the star events of the races. He annexed the Free-For-All-Race and also the heavy car race, the only events in which he entered his Fiat. He won with the same car that he had used in the Santa Monica Race without change or addition of the Dixon Lubricants used in that race.

The medium-heavy car event at the Tacoma Race, won by

Earl Cooper, was another demonstration of pluck and good lubrication. After the race Cooper wrote to the Dixon Company: "Permit me to thank you for the part you played in my success at the recent races held at Tacoma. Never in my experience in race driving have I had a motor run more smoothly than my little Stutz did there, and I can only believe it was due to the use of Dixon's Graphite Lubricants. Further than this, I want to say that it would take a great deal of urging to induce me to do without this form of lubricant in the future. I am certainly enthused over the results obtained." It will be readily appreciated why Cooper wrote so strongly about graphite lubrication after the accident which happened to his car is related. Cooper was one of the few drivers who did not use Dixon's Motor Graphite in his engine. During one of his many trials about the course upon which he afterwards proved his supremacy, the piston ring of his Stutz broke and registered a terrific zigzagging score upon the wall of the cylinder and piston. Upon examination it was found that the scoring was an eighth of an inch in depth and the worst that had ever been seen by those who made the examination. Cooper of course despaired of even entering the race, for he did not have any extra cylinders or pistons and could get neither in time to repair his car. As a last resort Cooper determined to use Dixon's Motor Graphite, though he did not expect it would help him to even enter the race. That evening he fed a quarter of a pound of motor graphite into the crank case and let the car



The Late David Bruce-Brown who was the most Popular Racing Driver in the Country. His Death Cast a Shadow of Sorrow and Regret over the Running of the Grand Prize and Vanderbilt Cup Races

run all night. The next morning the same operation was repeated, and again at night a third quarter of a pound was added. Cooper was told that the only chance he took in using so much graphite was that it might short-circuit his plug. To obviate this trouble he was told that on the morning of the race he should run the oil and graphite out of his crank case and that it could not then do any harm and the benefit of a "graphitized" surface would be retained. Cooper then ran the race and won his class. He afterwards surprised many of his friends who had suggested the use of Dixon's Flake Graphite, by telling them that instead of washing the graphite from his crank case as had been suggested, he had upon the morning of the race added the fourth quarter of a pound of graphite. He was as much astonished as he was delighted at the result of his experiment. He said that his engine had never run better and had never had as much compression, and that he used 50% less oil than ever before for the same distance.

Upon returning to San Francisco, Cooper examined the car after taking the cylinders off, and much to his surprise he was unable to find the deep score caused by the broken piston ring. It was only by taking the sharp end of a scraper and running it around until it sank into the graphite that had completely filled in the scored surface, that he was able to finally discover the place.

Bob Evans and Jack Tower ran first and second in the light car race in their little Flanders, both bucking the then

world's record for their class. Both cars were lubricated throughout with Dixon's Graphite Automobile Lubricants.

Not only do the winners of the four most important events at Tacoma realize and acknowledge the value of Dixon's Graphite Automobile Lubricants, but other drivers are equally well pleased with the qualities which they have found in no other lubricants. At Indianapolis, in the International Sweepstakes Race, over 85% of the drivers lubricated their cars with Dixon's Automobile Lubricants. Of the first eight cars to finish in that famous race, seven of them were lubricated with Dixon's Greases.

At the Elgin Road Races, Hughie Hughes scored a notable victory in winning the Aurora Trophy Race. Writing of his success, this popular and always genial driver said, "I cannot speak too highly of Dixon's Automobile Lubricants. They not only reduce friction to a minimum but their lasting qualities are remarkable."

The Illinois Trophy Race, won by Charles Merz in a Stutz, with Gil Anderson in second place also in a Stutz, recorded another victory of graphite lubrication, for both of these cars were lubricated with Dixon's Graphite Lubricants.

Another Elgin winner, Harry Endicott, who secured the Jencks Trophy Race and who is a firm advocate of Dixon's Automobile Lubricants, wrote that they "are the best ever" and that he "would not be without them under any circumstances." His brother, "Farmer Bill" Endicott, also a noted



Barney Oldfield with One of His Famous Cigars, the Angle of which is said to Indicate the Smoker's State of Mind. Oldfield has Defied the Adage that "They Never Come Back" and has thus far Performed Most Creditably

racing driver, expressed much of the same opinion after participating in the International Sweepstakes Race. "Car worked perfectly. All parts lubricated with Dixon's Automobile Lubricants; in perfect shape after the races," wrote "Farmer Bill."

After the Elgin Road Races interest centered upon the Milwaukee Road Races, where enthusiasm for the Grand Prize and Vanderbilt Cup Races ran high until the death of David Bruce-Brown occurred. Bruce-Brown was the most popular racing driver in the country and his death cast a gloom about the other contestants, practically all of whom were his close personal friends.

At Milwaukee the Pabst Blue Ribbon Trophy Race, won by "Mort" Roberts, was another victory that reflected credit upon both the driver and the lubricants used. Concerning his success this driver generously says: "I was able to win the Pabst Blue Ribbon Trophy Race because of the perfect lubricating qualities of Dixon's Automobile Lubricants."

Harry Endicott again romped across the finish line ahead of other contestants in the Wisconsin Trophy Race at Milwaukee. He, of course, used Dixon's Lubricants, as he had at the Elgin Races.

Among the drivers who have devoted the greater part of their time to track racing, "Dave" Lewis made twelve starts in 1912, out of which he secured four victories with four second places and three third places. He is a strong advocate of

graphite lubrication and has used Dixon's Lubricants in all of his races within the past two or three years.

Bert Dingley, the champion racing driver of 1909, who is about to give up racing, said: "I thank you for the results and fine lubrication obtained from Dixon's Automobile Lubricants in cars I have operated for speed and road contests."

Harvey Herrick, the champion racing driver of 1911, wrote: "I am convinced that the high average of speed maintained, the freedom from all kinds of lubricating troubles, was due to the use of Dixon's Automobile Lubricants." Herrick also established a reputation as a pathfinder during his famous and epoch-making coast-to-coast trip for the Hearst Newspapers.

Altogether, the racing season of 1912, though not so successful as other seasons from a financial viewpoint, has demonstrated a few mechanical truths that will help the automobile industry in general. The drivers are practically unanimous in declaring that the use of Dixon's Automobile Lubricants has aided materially in eliminating friction troubles, and as Barney Oldfield said, after his first use of Dixon's Lubricants: "I have never before experienced the sense of safety and lubrication surety that I felt today."

OIL SHOULD not be used on rawhide pinions. Flaked graphite is the approved lubricant for gears of this kind.

—*National Engineer.*

ELIMINATING BAD SPRING SQUEAKS

A reader of *The Automobile* wrote that for some time the left front spring on his car had troubled him by keeping up a continued squeak when traveling over any road that was not as smooth as new asphalt. He had kept the shackles well greased and yet that did not seem to do any good, as the noise still continued. He had come to the conclusion that the noise came from between the leaves of the spring and would like to know if this could possibly be so and how to cure it if it was?

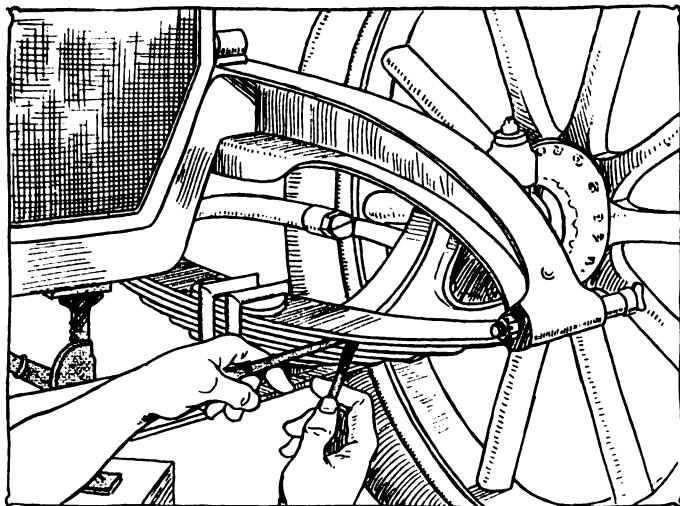


FIG. I

"The answer to this question," wrote the editor of *The Automobile*, "is simply lubrication. Good graphite, which can be secured from any of the supply houses, is the best lubricant for springs because it will stay in place and will not require renewal for a long time. The method of inserting the graphite between the leaves will be seen in Fig. I. The car is jacked up under the front member of the frame so that all the weight is taken from the springs. The leaves will then have a tendency to separate. A chisel or any solid piece of metal may be used to still further pry the leaves apart while they are painted with the graphite. If the spring seems to be in rather bad condition, it would be well to take it off the clips and remove all but the top leaf, which is held in place by the shackles. These can be left undisturbed as it will be simple to clean this leaf while it is still on the car. Clean the leaves thoroughly with kerosene and then wipe them dry. After this, coat them quickly with graphite and reassemble them. This will take the squeak out of the spring and leave it in perfect condition. The springs require this treatment once a season and if it is done in the fall, before the car is put up for the winter, the squeaks which often issue from the springs when the car is taken out for the next summer's season, will not be present."

THE TARIFF SCARECROW

GRAPHITE is not a publication for tariff purposes, nor is it a publication that rushes into any attempt to solve political problems or issues, but some views of the editor of the *Washington Post* seem to be worth reprinting.

The *Post* believes that Mr. Wilson displayed such shrewdness, such candor, and such ability during the campaign as to make it certain that he will not run amuck on the tariff.

The tariff is a scarecrow that has been used for years by politicians to frighten business. It is the chief resource of the demagogue who is trying to make the people believe that the country will go to the dogs unless he is elected to office. Tariff revision is the bugaboo that is used to extort campaign contributions from business, and politicians in both parties are equally ready to trot out the scarecrow, whenever they think they can make the business interests pay tribute to them in votes or money.

Business was never better in this country and the prospects for continued good times for every industrious man, rich or poor, are exceedingly bright. It remains for these workers and not the politicians, to see that good times are maintained. Let every man attend to his business and it will be the politicians who will go broke. The politicians deal in bugaboos and unrealties; the producers, traders, transporters and manufacturers deal with material things, the necessities of life. The politicians can be dispensed with, but the business of feeding, clothing and housing a hundred million people must go on.

A pleasant thing to remember is that the people get a whack at the politicians every two years. If the tariff tinkering becomes too serious, the people can turn out the majority in the house of representatives and thus stop further trouble, no matter how the administration may be bent upon pursuing its theories. This happened only two years ago, after the republicans had been triumphant and after Mr. Taft had received a million more votes than Mr. Wilson has just received.

OPEN THE DOOR

At this time of the year, when good and new resolutions are made it may be that none better than the following could be adopted.

Open the door, let in the sun;
He hath a smile for every one;
He hath made of the raindrops gold and gems,
He may change our tears to diadems—

Open the door!

Open the door of the soul; let in
Strong, pure thoughts that will banish sin:
They will grow and bloom with a grace divine;
And their fruit shall be sweeter than that of the vine—

Open the door!

Open the door of the heart; let in
Sympathy sweet for stranger and kin;
It will make the halls of the heart so fair
That angels may enter unaware—

Open the door!

—AUTHOR UNKNOWN.

THE DAILY papers tell us that a little fifteen year old girl named Rosa said it was silly for her to be sent to school to whittle pencils when she should be peeling potatoes at home, and anyway she was busy in the selection of furniture. When the magistrate learned that the little truant was a married woman he adjourned the case a week.

DIXON'S graphite publications sent free upon request.



PHILADELPHIA TRADING COMPANY'S NEW STORE

"There are not a great many large wholesale stationery concerns in the United States," says *Walden's Stationer*, "and Philadelphia, the third largest city in point of population, seems to have been overlooked by fate, for it is a fact that the city of brotherly love has not demonstrated in the past its ability to support or maintain successfully a good sized jobbing concern."

"The above, however," adds *Walden's*, "is written in the past tense, for since the inception last spring of the Philadelphia Trading Company, the statement can be made no longer. The Philadelphia Trading Company is a deserved success and the trade individually and as a whole is well pleased."

The character of the lines handled by the Philadelphia Trading Company is emphasized by attractive signs hung upon the beams across the ceiling in their attractive store at 1214 Arch Street. Each sign is located, as may be noted in our illustration, so that those who enter cannot help but see them.

Prominent among the lines handled by the Philadelphia Trading Company, are Dixon's American Graphite Pencils. The Dixon sign shown in the illustration is upon the ground floor of the three stories occupied by the Philadelphia Trading Company. Each floor is 173 x 32 feet. The Company expects to occupy, after January 1, another floor of the modern eight story and basement building in which they are located.

"It is the unique experience of the Philadelphia Trading Company to be at one time one of the newest as well as one of

the oldest stationery jobbing concerns in America. The business really dates back to 1858, three years before the Civil War, when Jacob Hollowbush started in business at 18 North Front Street, Philadelphia. He handled a general line of stationery and household articles which in those days went hand in hand, and by shrewd practical methods laid the foundations for business that would stand the test of years.

"The name of S. Davis Carey became associated with the business in 1866, when the title became Hollowbush & Carey. Later, in 1883, the name was again changed to Carey Bros. & Grenemeyer. Successive removals were made to 218 Market Street, following the trend of business."

OVER 250 steam railroads are making daily use of Dixon's Flake Graphite. They add it to their greases or oils as occasion demands. They find that it increases the lubricating value of greases and oils, and it has also been demonstrated beyond any question, that Dixon's Flake Graphite is the only known substance that will put bearing surfaces in a condition where oils and greases can do their best work. The final result is an increase of power on the engine and less wear and tear. Engineers know that they can pull heavier loads if the bearings throughout the train have been treated with Dixon's Flake Graphite.

THE MAN was not far out of the way who said, "Diplomacy is treating another man's assurances as if you both didn't know that both of you were lying."

MORE ABOUT FRICTION VS. TRUTH

As a sequel to the advertisements which appeared in the November issue of GRAPHITE, we reproduce the following part of a controversy that has awakened the interest of many engineers and other users of lubricants:

"MISGUIDED SOULS"

By JAMES TEMPLE

NOTE:—See page 7, advertising section of ——— issue of September, and page 20, advertising section of ——— issue of November.

A writer of advertisements for a graphite concern has taken exception to certain statements made on this page about graphite. His point is fairly well taken, and it would seem that the young man has some small ability as a writer, *but he is unfortunate in the selection upon which to exercise his talent.*

The statement made here was, in effect, that those persons were *misguided* who were using or advocating the use of "grease" containing graphite or any other body-giving fillers, in preference to *pure* petroleum grease.

The young man's chief objection to the statement was the manner in which it was made; "slang of the underworld," he called it.

But if his purpose was to controvert the material facts of the statement, he failed of his purpose quite dismally.

Graphite, like other "fillers" used to give body to certain kinds of grease "lubricants," is *not a true lubricant* any more than is talc, soapstone, etcetera. They are simply expedients used by "grease" makers, or compounders who have not the knowledge or facilities to make a *pure petroleum* grease that will have sufficient *body* without a "filler" of some sort.

It is true that graphite possesses the quality of keeping apart the moving surfaces of a bearing. *So does clay;* but you wouldn't call clay a lubricant.

This keeping apart of the bearing surfaces is only one of *several* functions required of a lubricant. Why introduce a *solid* into the bearing just because it will perform *one* of these functions when a *pure petroleum* grease will perform *all* of them?

Graphite is fine to put in lead pencils, and it has been used to advantage as a lubricant on slow-moving parts of certain kinds of machinery, but our advice to the man who requires the maximum efficiency of his power plant, and who places any considerable value on his machinery, is that he use a *real* lubricant—*pure petroleum* grease.

But lest we, like our champion of graphite, "*draw out the thread of our verbosity finer than the staple of our argument,*" let us close this "talkfest" with a quotation of comparative figures resulting from actual working tests:—

————, a *pure petroleum* grease, is 1400 per cent higher in lubricating efficiency, under 200 per cent greater bearing pressure, than the best known graphite compound.

Further:—Repeated tests made by competent authorities, not connected with any lubricating concern, have demonstrated that ——— will give a lower bearing temperature, longer friction in pounds and a lower co-efficient of friction than any other lubricant manufactured by anybody anywhere.

The Dixon Company replied as follows:

"LET US CLOSE THIS TALKFEST"

But don't fail to read the "Efficiency Experiment" at the end of this advertisement.

Mr. James Temple, who is writing the advertisements for a grease manufacturer, said in one of his advertisements, "It has been suggested by certain misguided souls, who are otherwise safe, sane and rational, that graphite might improve the lubricating qualities of ——— grease." Then he sounded a warning against the use of graphite. Whereupon we made a statement of some very forceful facts. Apparently they made him sit up and take notice and wonder why he had put his foot in it. He tries to defend his position and ends up with "Let us close this talkfest."

Oh, no! Let us get down to where we each belong and it will be seen we ought to go hand in hand, and we will unless he draws the "color line." There is no other objection he can make and stand on facts. Dixon's Flake Graphite must have a vehicle to carry it to all parts of the bearings and that is what the grease does, and the better the grease the better the result.

The chief engineer of a big lumber company had great difficulty with a bearing. He was unable to make it run cool and *he was using the very grease Mr. James Temple says cannot be helped by graphite.* The grease alone failed, utterly and completely. A happy thought came to that engineer; he again cleaned the bearing, rubbed it with Dixon's Graphite, mixed some graphite with the grease, applied it and then filled up with the grease, and all further trouble and worry was at an end.

Was that engineer a "misguided soul?" We think not, James; we think the graphite helped the grease and he says he "knows it." So do other engineers.

What is needed is a better understanding of the function of graphite, oil and grease and don't call a man a "misguided soul" because you cannot absorb a truth that has been brought before you. For the present consider the following "efficiency experiment" that points to an "annual saving of 260,000 dollars."

The New York Times, Oct. 16, 1912, contains the following:

SAVING THE PENNIES

Louis D. Brandeis would probably be highly gratified at the results of an efficiency experiment recently carried out by the Lackawanna Railroad. On a big superheater engine of the Pacific type, which hauls the Lackawanna Limited between Scranton and New York, the company tried out a device for automatically supplying graphite to the cylinders. Records made during the test indicated a consumption of 12.37 pounds of coal per car mile without the graphite, and 11.43 pounds with it, or a saving of 7.7 per cent in fuel. Based on the company's coal bills for the past year this seems to point the way to an annual saving of \$260,000.

How few of those enjoying the warmth of their coal fires this winter will think of the fact that the first coal mined in the United States was in 1814. That year twenty-two tons of anthracite were mined in Pennsylvania. Next year there were fifty tons, the succeeding year seventy-five.

DIXON'S graphite publications sent free upon request.



RIDGEWOOD PUMPING STATION, BROOKLYN, N. Y.

This fence is protected with Dixon's Silica-Graphite Paint, and will therefore need no further attention for a number of years.

Behind this particular fence may be seen the Ridgewood Pumping Station, Brooklyn, N. Y.

The F. E. Carpenter Company, New York City, well known manufacturers and erectors of iron railings, entrance gates, etc., are responsible for the trim appearance of this fence and for the excellent protection it will have against weather elements.

THE WEALTHIEST WOMAN, FRAU BERTHA KRUPP-VON BOHLEN

The New York Sun tells us that no one among the number described as "the richest woman in the world" has a more substantial claim to the title than Frau Bertha Krupp von Bohlen-Halbach—and no one, perhaps, is more indifferent to it. Her fortune is said to have increased \$25,000,000 or from \$45,000,000 to \$70,000,000 in three years. This is in solid German values without doubt, for the fabulous estimates of her riches have run to \$225,000,000. Her income has been set down all the way up to \$5,000,000 a year. She is described as a queen, or more extravagantly as an empress, in the midst of her enormous holdings. Other rich women may enjoy the domination of their households, but although relieved by a board of directors of the details of management, Bertha Krupp, before and since she married the diplomat, Dr. Von Bohlen, has been the mistress of 63,000 employees, involving perhaps, with their families, 300,000 persons. She owns 560 mines in Germany alone. She owns the steel and gun works, with the ship yards at Kiel, and the world-famous gun and armor works at Magdeburg.

Her palace at Essen, built by her father, took 500 men four years to erect. It includes a personal suite for the Kaiser, who with the Empress has honored it yearly. This is a distinction usually reserved for the highest nobility.

The same exception was made by the Emperor in attending her wedding, although it was said that he resented her love for a poor diplomat, when there were so many penniless princes at hand. But Bertha Krupp was sufficient unto herself to brook the imperial frown.

The New York Sun gave many more very interesting incidents in the life of this very wonderful woman.

DIXON'S graphite publications sent free upon request.



"Speakin' of mixtures," said Old Jerry as he refilled his jimmy pipe, "I've never used a cooler mixture than flake graphite and oil."

"In the old days," continued Jerry, "when 689 was the fastest engin' on the road, the boys used to wonder why it was never laid up in the tinker's shop an' why it never broke a schedule."

"Fine ole engin', Jerry,' they used to say. Nix, flake graphite, I says. And takin' an old Dixon ad. from my pocket, I read: 'Write for "Graphite Products for the Railroad" and Sample No. 190.' (You see I didn't mind givin' away the dope.)

"An', judgin' by the way Dixon's Flake Graphite is bein' used nowadays, every mother's son of them, an' their friends, must have wrote for that booklet and sample."

Joseph Dixon Crucible Co.

Established 1827.

JERSEY CITY, N. J.

GRAPHITE

VOL. XV.

FEBRUARY, 1913.

No. 2.

Issued in the interest of Dixon's Graphite Productions, and for the purpose of establishing a better understanding in regard to the different forms of Graphite and their respective uses.

THEN AND NOW

Today no man should accept a statement as truth unless it is backed up by good authority. The authority may be the reputation earned by upright dealing, or it may be the authority of a man who has demonstrated things and is rightly recognized as an authority.

In ancient times the practical operations were in the hands of artisans alone and it was not the correct thing for philosophers of the ancient world to bring their wisdom to bear on the arts and crafts.

There was, in fact, a complete divorce between the practical and the theoretical, and therefore no real science.

In ancient times the proper sphere of philosophers was considered to be speculation pure and simple, and to

such purpose did they speculate on casual observations that the most grotesque theories were evolved quite out of harmony with actual facts.

The philosopher Aristotle came to the conclusion that a vessel filled with ashes would contain as much water as one of the same size which has no ashes in, but he showed no desire to see whether this was actually the case or not.

Today the practical and skilled artisan understands the theory of his work quite as well as he does the practical part of it, and the professor before he lets his theory go out into the wide world has it tested and demonstrated, that he may not become the laughing-stock of his fellowmen.

Today there are too many manufacturers who permit advertising men to have full sway in describing and telling about the goods made. The advertising man feels that he must get results for his concern. Getting quick results adds to his reputation as an advertising expert, and also adds to his income, which seems to be the chief thing in the minds of many writers of advertisements.

We are glad to say that we know of many manufacturers, who, like the Dixon Company, keep a strong curb on any advertising man that they may employ and see to it that only actual facts are stated in the advertising matter sent out. Of course, as years go on it is seen that some statements made in earlier years are wrong and these are quickly corrected.

Whenever the Dixon Company make a statement, they either furnish the name of the authority, or have that authority

ready to name if called for. There is not a statement made in any Dixon advertisement that the Dixon Company is not ready to back up and demonstrate.

In the matter of graphite as a lubricant and the question of flake graphite or amorphous graphite, the Dixon Company has spared no expense in having investigations made by recognized scientific experts throughout the world and by practical mechanics as well.

Go where you will throughout the entire civilized world, you will find Dixon's Flake Graphite is the recognized standard of solid lubricants throughout the entire mechanical world.

PURITY OF A MATERIAL

It Has Its Disadvantages Under Certain Conditions

We speak of the ubiquitous small coin as a "copper." Copper in the pure condition, however, would be too soft for the wear and tear which the coin has to undergo; consequently, 5% of foreign metal (mostly tin) is added to the pure copper in order to harden it. The curious thing is that tin itself is quite a soft metal, and yet the addition of 5% of it to pure copper produces an alloy which is much harder than copper itself.

A graphite paint made of pure graphite would be sure to fail in a comparatively short time if exposed to out-door conditions. Graphite is too soft to stand the wear and tear of out-door exposure; therefore, we have Dixon's Silica-Graphite Paint instead of Dixon's Graphite Paint. The silica and graphite used in Dixon's Paint pigment are natural products, both coming from the same mine. Even the particles are found welded together and remain so even when ground to an impalpable degree of fineness. Dixon's Silica-Graphite Paint is an ideal paint pigment.

PENCILS AND CIGARS

Most men who smoke cigars insist upon a long filler and refuse to buy a smoke with an inside full of "cuttings" or "scraps," because it means a bad smoking cigar with poor drawing qualities. Why not be just as particular about pencils. Broken leads will never annoy the man who asks for Dixon's American Graphite Pencils. He is assured of a long, smooth filler of American Graphite of just the right grade to suit him. Try a box of Dixon's Anglo-Saxons—say medium grade. Ask your stationer.

A TACK'S progress is limited by its head. How like tacks we are.



JOSEPH DIXON CRUCIBLE CO.

JERSEY CITY, N. J., U. S. A.

**Miners, Importers and Manufacturers of Graphite,
Plumbago, Black Lead.**

OFFICERS:

President—GEORGE T. SMITH
Vice President—GEORGE E. LONG
Secretary—HARRY DAILEY
Treasurer—J. H. SCHERMERHORN
Ass't Sec'y & Ass't Treas.—ALBERT NORRIS

DIRECTORS:

GEORGE T. SMITH	GEORGE E. LONG
WILLIAM MURRAY	EDWARD L. YOUNG
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J. H. SCHERMERHORN	

OFFICES AND SALESROOMS:

NEW YORK SALESROOM, 68 Reade Street.
 PHILADELPHIA SALESROOM, 1020 Arch Street.
 SAN FRANCISCO SALESROOM, 155 Second Street.
 CHICAGO OFFICE, 1324 Monadnock Block.
 BOSTON OFFICE, 347 John Hancock Building.
 PITTSBURG OFFICE, Wabash Terminal Building.
 ST. LOUIS OFFICE, 501 Victoria Building.
 BALTIMORE OFFICE, 1005 Union Trust Building.
 BUFFALO OFFICE, 72 Erie County Savings Bank Building.
 ATLANTA OFFICE, Fourth National Bank Building.
 EUROPEAN AGENTS,
 Graphite Products, Ltd., 218-220 Queen's Road, Battersea, London.

KICKS

Of all the kicks which we have received during the last year, we think the one that comes to us from a million dollar concern is worthy of a place by itself and worth the telling.

The purchasing agent asks the Dixon Company to take back three No. 12 Dixon Crucibles and four No. 40 Dixon Crucibles, which he informs us that he cannot use because he has discontinued the Dixon Barium Hardening Furnace. Now Joseph Dixon made many an invention and we in turn have fathered many others, but we have never heard of the Dixon Barium Hardening Furnace, and what is still more, the Dixon Company has never even sold any crucibles to the concern whose purchasing agent is after our scalp.

Sometime ago we received a rather smart kick about the Dixon Crucibles and in that case the man did not even wait to

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ask us to take them back and make good. He shipped them at the time he mailed the letter. In reply we sent him a very nice letter thanking him for sending us proof of how much superior the Dixon Crucibles were to those of other makes and suggesting that he send us an order for a cask of Dixon Crucibles, as the ones he had sent back as worthless were made by friends of ours, another crucible manufacturer, and then we wrote to our friendly competitor telling him that it was in order for him to send us a good cigar.

Probably one reason why the Dixon Company lacks only fourteen years of being one hundred years old, is because it keeps its conscience clear and endeavors to find as much interest and amusement and good cheer in business as it possibly can.

In the matter of crucibles we believe that a great many of the complaints that come to us are not because of any fault of ours, but because of conditions at the user's end of the line. Conditions are fuel, draft, metal, weather and the same human element that we ourselves have to contend with, and on top of all this the fact that before the kick reaches us, it usually passes through several hands. The furnace tender tells the head melter, the melter tells the foreman, the foreman tells the superintendent, the superintendent tells the purchasing agent and the purchasing agent tells us. If each one of these several persons adds an item to the story it never helps the matter any and the story sounds pretty bad by the time it finally reaches us.

MINTER, NOT WILSON

E. W. Minter & Company, general contractors, of New York City, were responsible for the erection of the recent ten story annex and two story addition to the Richmond Hotel of Richmond, Va., and not the John T. Wilson Company, as was stated in the December issue of GRAPHITE. We are not at all surprised to have our attention brought to this mistake of ours, for the work on the Richmond Hotel is a credit to all concerned. And our modesty does not forbid us to again state that Dixon's Silica-Graphite Paint protects the steel-work contained in this building.

A HINT TO AMERICAN YOUTH

No cause, says *Daily Consular and Trade Reports*, has probably contributed more to bring about the phenomenal development of German export trade during recent years, than the means provided to encourage German youths, especially those connected with wholesale and export houses, to supplement the training they have received in the commercial and technical schools with practical studies during their spare time. This widespread commercial ambition has manifested itself, for example, in the formation of conversation clubs for practice in speaking English, Spanish, French and other languages used in international trade. This idea should certainly receive the attention of American business men and public educators interested in devising more practical instruction in preparation for the various vocations connected with our export trade.

THE world is apt to regard a man with no bank account as a no-account man.



OTIS ELEVATOR BUILDING, NEW YORK CITY

This office building is especially designed and built to demonstrate the products of the manufacturer, under plans and specifications prepared by Clinton & Russell, architects, New York. The Thompson-Starrett Company were the builders.

The building, seven stories in height, is located on the east side of 11th Avenue, between 26th and 27th Streets, and was designed to bring the offices and departments of the Otis Elevator Company under one roof. The illustration on this page, reproduced by courtesy of *Architecture and Building*, shows the substantial outlines of the structure.

The interior appointments are particularly pleasing and money has not been spared. The comfort and safety of the employees seems to have been one of the company's main ideas. A dining room is provided on the top floor. An efficient fire extinguishing equipment is maintained throughout the building and other means are provided for comfort and safety.

The 1,500 tons of structural steel was fabricated by the American Bridge Company, and is protected with Dixon's Silica-Graphite Paint, the world's unrivalled protective coating.

Have you seen a copy of the new edition of our booklet entitled "Notable Buildings?" This booklet gives the names of a few of the many important buildings whose steel work is well protected from corrosion with Dixon's Paint. Write us for a copy of this attractive little booklet.

DIXON'S graphite publications sent free upon request.

MOST NICOTINE FROM PIPE

As we have noticed among the Dixon folks both great and small, young and old, a disposition to burn tobacco on all sorts of altars, the following may interest them as well as others:

The *London Lancet* has been conducting an investigation into the poisonous effects of tobacco in the three forms in which it is generally used—pipe, cigar and cigarette. Tobacco in the form of snuff has practically gone out of use in England and chewing tobacco is exceedingly rare.

In spite of all of the hard words hurled at the cigarette the *Lancet* found the cigarette to be the most innocent form of smoking as far as nicotine is concerned. Next came the cigar, while the smoke from the pipe mixtures was found to contain the largest amount of nicotine. In other words, it would appear from the investigation that the cigarette is the least harmful form of smoking, the pipe the worst, the cigar coming between.

It is suggested, however, that too much importance has been attached to nicotine and too little to other constituents of the smoke. Among the other constituents found is furfural, a toxic and highly irritating substance, which occurs to the largest extent in the smoke of the Virginian cigarette, and to a far smaller extent in the Turkish and Egyptian cigarettes, while it is practically absent in the smoke of both the cigar and pipe.

It is suggested that this fact affords a possible explanation of the cigarette being a source of throat trouble, especially when smoked to excess.



PENCILS, PRESIDENTS AND PARCELS POST

"The first parcels mailed from this city," says the *Jersey Journal*, referring to the inauguration of the parcels post law in Jersey City, "were two sent by the Dixon Crucible Company, one being sent to President Taft and the other to George T. Smith, president of the Dixon Company. Each contained the Dixon Company's Christmas box of pencils. The parcels weighed nine ounces and cost eighteen cents in postage. Before the parcels post law became effective, these packages would have cost thirty-eight cents."

The photograph reproduced above shows these two packages before they were mailed. The addresses of the two presidents as well as the contents of the Christmas box are shown plainly.

The Dixon Company is rather proud to have been the "early bird" to catch the first parcels post delivery in Jersey City and no doubt President Taft and President Smith are equally proud of the representative assortment of Dixon's American Graphite Pencils and Erasive Rubbers which they received.

The assortment was comprised of four Anglo-Saxon Pencils showing some of the grades, shapes and colors of this popular seller; one each of Dixon's Best Red and Blue Pencil Crayons; Dixon's Yellow Aster; Dixon's Order Book and Dixon's Endurance, a copying pencil of medium grade with a point protector. In addition, the box contained a pen and pencil holder and two pocket pencils, including the new aluminum, spiral shaped pencil No. 2025 with propel and repel movement. These three latter pencils are among the recent carded productions of the Dixon Company. The erasers included two pencil and two ink erasers, in both disc and regular shapes.

The Dixon Company has received a great many letters from those to whom the Christmas boxes were sent and many of them express surprise and delight because it was the first parcels post package received.

"I LIKE SAM," says Lord Dundreary, in *Our American Cousin*, while reading a letter from his brother in England, "Sam's such an ass."

We are reminded of this saying of Lord Dundreary when we read some of the advertisements on graphite which indicate most surely that the man who wrote them is an ass, or is foolish enough to believe that the reader is.

IS THERE A MONEY TRUST?

Figures Which Tend to Prove That Money Trust is a Myth

Money trust investigators are given food for thought in figures compiled by A. Piatt Andrews, former assistant secretary of the treasury. They strongly support the argument that the alleged money trust is a myth. The figures are as follows:

Total number of banks in United States	25,176
In 1900 there was, as reported, a separate bank to every 7,357 of population.	
In 1912 there was a separate bank to every	388,003
of population.	
In Great Britain there is a separate bank to every 338,003 of population.	
In 1900 New York City's proportion of the country's banking resources was, in per cent.	23.2
In 1912 this proportion had fallen in per cent to	18.9
In 1908 ten London banks held	63.
per cent of England's total commercial deposits.	
Four Paris banks held	85.
per cent of France's total deposits, as reported.	
In New York today the ten largest financial institutions hold only	7.6
of the country's deposits.	
The members of the London Clearing House number.	18
The member of the Paris Clearing House number.	11
The members of the Berlin Clearing House number.	19
The members of the New York City Clearing House number.	64

The Newsletter.

AN AMERICAN LINE OF STEAMSHIPS

News That Will Gladden the Hearts of Americans Who Wish to Have American Goods Carried in American Bottoms

The Atlantic and Pacific Steamship Company of New York announced the direct sailing of their new 7,500 ton American steamer "Santa Cruz" for San Francisco, via the Straits of Magellan, leaving New York about February 1, 1913. The "Santa Cruz" will make the voyage in about fifty days.

Shipments will be handled through without transshipment en route. The Santa Cruz will return direct via Magellan in time to sail from New York about July 1st to 15, 1913. The Santa Cruz will be followed by the 10,000 ton steamers "Santa Clara," "Santa Catalina" and "Santa Cecelia," now under construction and contracted for delivery during the year 1913.

These steamers will be operated fortnightly through the Panama Canal as soon as that waterway shall be opened for commercial trade.

MOTORING DEPARTMENT, *The Globe*.—The springs of my car are continually squeaking in spite of the fact that I oil the shackles every day.—W. S. M.

The squeaking you speak of comes from between the leaves and can be dispensed with by loosening up the spring clips and jacking the frame of the car up a little in order to take the tension off the springs. It is then possible with the aid of a kitchen case knife to work a paste of graphite and oil between the leaves of the springs.—N. Y. *Globe*.

MORE ABOUT TRUTH VS. FRICTION

"And Reason Stood Aghast"

"Better be unborn than untaught; for ignorance is the root of misfortune."—PLATO.

A manufacturer of grease, and a good grease too it is, gets as mad as a wet hen because some of the users of his grease suggested that under certain conditions the grease was improved by the addition of graphite. He called such people "misguided souls" and what he has said about graphite shows he knows as little about graphite as the rest of us do about the hereafter.

Here is his latest spasm:

"At the Automobile Show in New York, about two years ago, the writer's attention was directed to the exhibits of two different manufacturers of mixtures containing this same substance. One informed the writer that this particular substance was incorporated for the purpose of softening the noise of the moving gears. The other one told the writer that his was a "first class grease," containing the same substance and with CEDAR WOOD mixed with it FOR THE PURPOSE OF SOFTENING THE NOISE OF THE GEARS. * * *

"And reason stood aghast."

He ended with the wrong quotation. He meant, "Write me down an ass," and the following is one of the thousands of witnesses ready to testify he is.

NORTHAMPTON-EASTON AND WASHINGTON
TRACTION CO.

EASTON, PA., Sept. 24, 1912.

Joseph Dixon Crucible Company,

Jersey City, N. J.

GENTLEMEN:—We have shipped you today by express to Chicago as per your request for exhibition, a half gear and pinion taken from our cars. The gear has been in service continuously for the past six years and was taken out of a car this week. It has made over 250,000 miles. The pinion has been in continuous service for five years and has made over 225,000 miles.

It will please you to know that we have never used anything as a lubricant on these gears, except DIXON'S GRAPHITE WOOD GEAR GREASE. When the new equipment was put in service, we filled the gear case full of your gear grease and then it was our custom every week to add about a double handful of new grease in the case.

These gears and pinions are the original ones shipped from the General Electric Company, with their eighty G. E. motors in the summer of 1906, and we might add that we use exclusively DIXON'S GRAPHITE WOOD GEAR GREASE on all our systems.

Very truly yours,
W. O. MAY,
General Manager.

DANGER IN PROLONGED FATIGUE

In these days when so many good men seem to falter in their work, become nervous and tired, it may be well to consider what the doctors are pointing out to us.

We are told that there are certain symptoms of nervous exhaustion which are familiar enough to many persons, so familiar in fact that they are neglected. Fatigue is disre-

garded by the average man or woman who is busy, ambitious and more interested in the accomplishment of the daily task than in caring for him or herself.

There is danger in prolonged fatigue and high nerve stimulation. After a certain point the nerves do not recover.

If men and women would only regulate their activities to their strength, it would not be as it is so often now, that by the time they have reached the age of fifty they have passed their prime and lost the capability of best effort.

In other words, let us go a-fishing or have some hobby; at least let us take more rest and more vacation and take better care of ourselves.

UNDERSTANDING ONE ANOTHER BETTER

Sometime ago the American Tobacco Company gave a dinner to its heads of departments and salesmen. There were about 400 persons present. The dinner was given in New York City, and some of the guests came from places as distant as California. Addresses were made by the president of the company and by general counsel.

The American Tobacco Company believes, as do other large companies, that it is a vital essential to have all the officers of the company, the department managers and the salesmen get together at least once a year for a friendly talk and a business communion.

The president said in his speech that if that meeting should assist in bringing them closer together; in understanding one another better; in increasing the enthusiasm in their business that is so necessary to success; in helping them to realize that the future of the company depends upon their mutual co-operation and loyalty, it would have well served its purpose. He said: "Help one another and remember no one ever built himself up by pushing others down. True success is built up on loyalty, integrity and hard work, mixed with ordinary horse sense."

AN OLD SUPERSTITION

Based on what is said to be an Ancient Prayer

The following comes to us from the Hawaiian Islands. While the envelope bore the post office stamp of a town in the Hawaiian Islands together with the date of December 14, the enclosure carried only the following:

"O Lord Jesus I implore Thee to bless all mankind. Keep us from evil by thy precious blood and take me to dwell with thee in Eternity."

This prayer was sent to me with the following directions. Copy this for nine days without skipping a day.

Send a copy daily to a friend.

Do not sign it.

Its an ancient from Jerusalem and it's said that he who does this shall meet great fortune, but he who does it not shall meet with great calamity."

Several persons connected with the Joseph Dixon Crucible Company have received communications similar to the above and we learn of others who have also received them. Seems to be another form of the chain letter.

SOME engagements end happily, but in most cases the parties get married.



WINS AUTO RACE WITH DIXON'S LUBRICANTS

Here is Horace A. Rayno, well known throughout New York State in automobile circles, crossing the finish line as winner of the twenty-five mile Free-For-All Race at the Woodlawn Park

Automobile Races, Albany, N. Y. Mr. Rayno represents the selling interests of the Marmon Car in Albany and surrounding counties, and the car in which he is pictured as a winner is a Marmon "32" Roadster.

So pleased over the result of the Free-For-All Race in which he romped at least a half mile ahead of the nearest contestant, and so well satisfied was he with the performance of Dixon's Automobile Lubricants, that Mr. Rayno wrote the following letter concerning his experience:

RAYNO BROS. & REID GARAGE
ALBANY, N. Y., Oct. 29, 1912.

*Joseph Dixon Crucible Company,
Jersey City, N. J.*

GENTLEMEN:—At the request of your representative, I used Dixon's Graphite Automobile Lubricants in my Marmon "32" Roadster throughout the car in both the ten mile and twenty-five mile races at the Woodlawn Park Races, Albany, N. Y., October 29, 1912; finishing second in the ten mile race, first in the twenty-five mile. Upon examination of bearings and gears, I found all in perfect condition. This car, belonging to Dr. L. G. Stanley of this city, had been run 50,000 miles before entering these races and has always been lubricated with Dixon's Graphite Lubricants. I will hereafter gladly use and recommend your lubricants in preference to all others in future races.

Very truly yours,
HORACE A. RAYNO.



METAL INSURANCE

By L. M. STOCKING

Is this an unfamiliar term? Yet it is the thing to do and the live owners of property are adopting it throughout the country. If the rate for fire or life insurance is too low, you think twice before giving your risk to that company, as you doubt its ability to carry out its contracts under all conditions. If the rate is too high, you shun that company as an enemy of economy. A fair price for the best protection in a concern of reputation, is your motto, and ours, in writing you this

homily. What are we driving at? Why, metal insurance by protective paint! Have a paint policy, Mr. Owner! Do not paint your structures spasmodically. Metal surfaces should be inspected regularly and a paint applied which will give the longest service, as you understand how it is possible to save in labor cost by infrequent repainting. Do not be deceived by the temporary allurement of a lower cost for paint of cheaper quality and resultant shorter service. A structure well painted is insured against decay and depreciation. Thus your property inventories higher and your profit and loss account stands you in more on the credit side. Never paint spasmodically; do not let your structure run down and then make a fruitless effort to bring it up to efficiency. This is waste of money and hits you hardest at your weakest time. Use the best paint; make regular inspection; and paint with the paint that lasts longer: DIXON'S SILICA-GRAFITE PAINT. It is made in four colors—ONE QUALITY only, and is equally suitable for metal or wood. It is the world's greatest endurance paint and we can say no higher word for it than the leading railroads and manufactories have adopted it, after exhaustive tests, as their maintenance paint. Use it in the original packages. Nature's unrivalled mixture of the silica and graphite is alone mined by the Joseph Dixon Crucible Company at Ticonderoga, N. Y. You cannot get an equally satisfactory paint from any other manufacturer.

A WISE POLICY

Hon. Huntington Wilson, Acting Secretary of State, in a speech delivered before the American Hardware Manufacturers Association, said that it would be a wise policy for the business men of the United States to consider several things in connection with South American business.

We must have American banks in Latin America above all. Our whole foreign trade pays toll to foreign bankers who naturally favor their own merchants. Again, we lack facilities for the training of young men to go abroad to sell our goods, equipped with foreign languages, knowledge of foreign conditions and that cosmopolitan tact, as necessary in foreign trade as it is in diplomacy.

The opening of the Panama Canal should find the United States ready to enter upon a period of vast expansion in the field of foreign trade. It may find us in the ridiculous position of possessing almost no ships of our own to share in the lucrative carrying trade. Do the business men of the United States think it is sound business to pay to foreign countries all the vast sums due for transportation of our goods abroad?

It lies with the business men to form that public opinion which will enable us to get a merchant marine. If we don't like straight subsidy or mail subsidy, why can't we pay a subvention for the trained naval reserve we should get through having fleets of steamships manned by Americans, or for the priceless advantage of having an adequate fleet of American steamers subject to the government's call to act as transports in case of war?

To INSURE a long, smooth journey for your train of thought start with a Dixon Pencil. It assures the writer of an unbroken rest from the petty annoyance of breaking leads.

THE COUNTRY'S NEED OF GREATER RAILWAY FACILITIES AND TERMINALS

From a Speech of James J. Hill at the Dinner of the Railway Business Association

The commerce of the country can escape disaster only by additions to and enlargements of terminals. Between 1909 and 1910 freight ton mileage grew eleven times as fast as trackage, and five times as fast as equipment. When the railroad yards are filled with cars that cannot be moved, the railroad loses a portion of its earnings; but the business man loses a larger share of his trade, and the workingman his employment.

The public assumes that if enough cars are provided they can be moved on schedule time from point of origin to destination, wherever these may be. This is not the real trouble. What is really needed is the greater movement of cars. There is but one possible remedy—enlarged terminals.

The main question back of that is capital. Large sums of money must be raised and the question is what security can the railroads offer? Many of them have not only pledged their credit to the limit but have absorbed a large share of their surplus earnings that in other countries would have been paid out in dividends.

Two questions arise. The first is, "Why are the railways not now in a position to borrow the money and build the terminals at once?" The second is, "What have the railways done to entitle them to confidence, to relief and to a more fair and generous treatment by the public?"

The impairment of credit has come from decreased earning power and increased expenses. Mr. Hill gave all details, but space does not permit us to repeat them.

Mr. Hill believes the railways are entitled to confidence and relief because they have displayed efficiency. They have shared their gains liberally with the people and it is up to the people to say whether or not these terminals and other facilities shall be supplied, just as it is up to them to suffer the severest of the consequences if they are not.

Mr. Hill believes that the railroads of the United States are entitled to both confidence and relief because they have not abused their trust in the matter of capitalization, and he finished by saying:

"The country cannot rise to the level of its duty or its opportunity until the scientific knowledge of the expert and the action of the just judge are applied to the settlement of economic issues. The American people must soon begin to realize how injuriously they are themselves affected by a game that has been played for so many years with their business prosperity and their future welfare. The people must realize that regulation must not be strangulation."

"It is the duty of every business organization, of every business man, of capital interested in safe investment and labor interested in sure and remunerative employment, to help swing the country into line behind the only policy that can help and save them all. No pledge of national credit, no subsidy in cash, no immunity or privilege is asked; only freedom to raise on reasonable terms the capital without which the work cannot be done; implying necessarily freedom to earn on that capital the return without which it will not be forthcoming, and enough additional to make and keep railway equipment and service equal to the progress of invention and improvement and to the just expectations of the people."

ORE CAR LUBRICATION

Mine car journals are ordinarily lubricated with cheap oil, sometimes with better quality oil, but neither is advisable from the standpoint of economy. If the oil cavities in the car wheels were oil tight there would be no objection to using oil. As a matter of fact, so much oil leaks out past the loose-fitting bearings that only a small proportion of the amount used really does any work as a lubricant. A properly compounded grease is far better than oil.

The grease should not be so heavy that it will cling to the outside wall of the hub and not flow in through the oil channels to the axle, nor should the grease be so thin that it will leak from the hub in the same manner as oil.

Dixon's Graphite Grease No. 0424 is just the right consistency to furnish the proper lubrication without waste. No. 0424 retains its normal density through a wide change in temperature, it protects the metal from corrosion and the action of acid mine water. If the cavity is plugged so that grease cannot run out, it will last far longer than any other grease offered at the same price. One filling of the hub should last from three to six months, though the length of service naturally depends upon the capacity of the oil cavity.

Dixon's No. 0424 Grease is positively the best lubricant for either plain or roller bearing mine car journals and is cheaper to use than any kind of oil because it lasts longer at each application and saves the time and labor required for oiling and unscrewing and screwing plugs. The grease is applied with a grease gun.

It is an interesting fact that in numerous instances Graphite Grease No. 0424 has supplanted cheap black oil as a lubricant for ore cars even in Northwest Canada. When it is considered that the original cost of the grease is considerably more than oil and that freight and customs duties largely add to the cost, it is fair to assume that the grease has merit. Anyone interested in this subject will do well to investigate our claims.

DIXON'S PAINT RESISTS BRINE

W. C. NEWMAN,

MANUFACTURER OF ICE.

FARMVILLE, VA., Dec. 30, 1912.

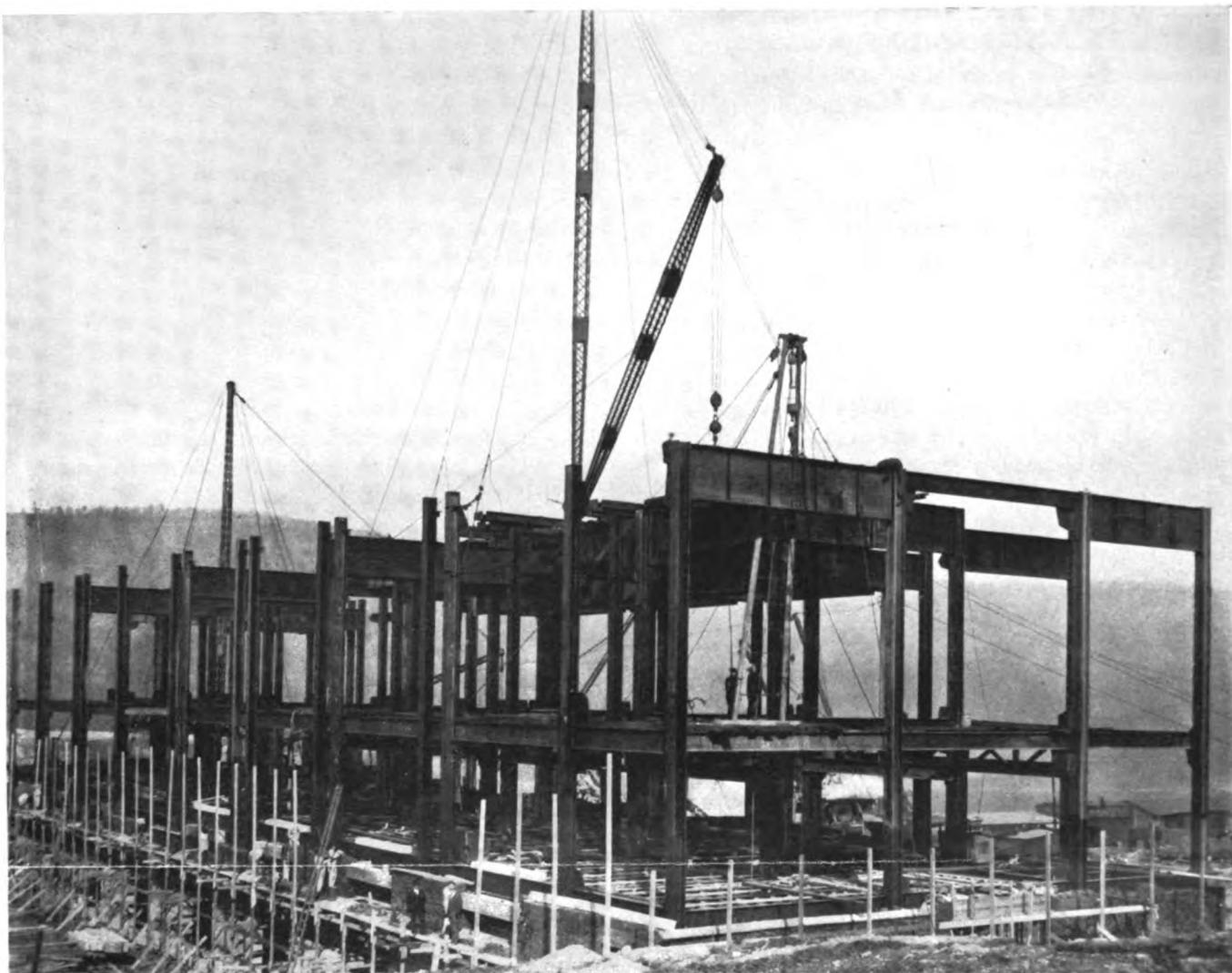
Joseph Dixon Crucible Company.

GENTLEMEN:—In reply to yours of recent date inquiring how I liked Dixon's Silica-Graphite Paint, I have two ice tanks on which I used it, and so far is standing on the brine coils all right. Have painted one with Dixon's Natural Color and I will paint the other with Dixon's Black this spring when overhauling the plant. Dixon's Paint so far is the only paint that has stood up under the trying conditions of brine coils, and I have tried a number of different brands of paint.

Yours truly,

(Signed) W. A. NEWMAN.

NOTE:—Mr. Newman's brine coils were painted in November, 1911. This testimonial is one of the many references we have on file referring to the excellent service being given by Dixon's Paint under severe conditions of service. If you are in the market at this time for a good metal protector, it will pay you to investigate.



BOILER HOUSE, LEHIGH COAL AND NAVIGATION COMPANY, HAUTO, PA.

In the May, 1912, issue of GRAPHITE, an illustration appeared of the Lehigh Coal and Navigation Company's Coaling Plant at Hauto, Pa., and later on in the July issue, an illustration of the company's plant at Coaldale, Pa., together with a short description of the modern method employed by this company in handling "Old Company's Lehigh."

In this issue of GRAPHITE we reproduce a photograph of the boiler house of the power station taken at Hauto, Pa., during the course of its erection. The steel work shown in the above illustration was erected by J. A. Fitzpatrick, Inc., the engineers being L. B. Stillwell Company, and the contracting painters, the Vassilaros Contracting Company, all of New York City. The fabricators were the Belmont Iron Works of Philadelphia. Dixon's Silica-Graphite Paint was selected for both shop and field coats for the preservation of all steel contained in this structure.

"HOT DOGS" FAIL AN AUTO

But the Pup that Caused all the Trouble Gets Away Scot Free

Never again will a "hot dog" cheer William Kilroe, a Tarrytown hackman, as he waits at the station late at night for passengers. The reason is that Kilroe had a hurry call yesterday while he was cleaning out the transmission in his auto-

mobile. With no grease and the nearest garage a mile away, he decided to substitute some frankfurters which his wife had bought for the Sunday dinner.

He threw in a dozen links, screwed on the cover and dashed off. On the way up Central Avenue a little fox terrier ran out from the sidewalk, but Kilroe did not see it. The chain on the rear wheel caught in the dog's collar, whirled the animal around and tossed it upon the rear axle. Kilroe, hearing the "ki-yis" coming up from under the car, thought of the frankfurters.

"Begorry, it's thim frankfurters I put in the transmission. I never did believe it before, but now I know why they call them dogs."

When Kilroe stopped the car the terrier freed itself and made off down the street without being discovered. Kilroe refused to drive the car further, cleaned out the frankfurters and sent to a garage for a pail of graphite.—*New York Tribune*.

ACCORDING to the Vineland, N. J., *News*, a horse doesn't care whether he is fed "a la cart" or "table d'oat," so long as his hay is "a la mowed." He does, however, kick when the wheels of the wagon are not lubricated with Dixon's Graphite Axle Grease.

DIXON'S graphite publications sent free upon request.



PAINT PROTECTION FOR GUNMEN

No person, we are assured, of ordinary attainments could manage to scale the wire mesh fence which surrounds the New York State Rifle Range at Blauvelt, N. Y. The fence is 1500 feet long and was manufactured, erected and painted by the F. E. Carpenter Company of New York, the well known fence manufacturers.

Although we are not certain whether this fence was erected to safeguard the interests of poor marksmen or merely to protect a prying public, we do know that so far as the fence is concerned, it is protected against almost everything in the way of deterioration by corrosion, for Dixon's Silica-Graphite Paint was used by its erectors as a protector.

THE COST OF LIVING

Roger W. Babson says there are a great many apparent causes for the present high cost of living, among which may be mentioned high prices resulting from labor demands for advanced wages; over-capitalization of industries and speculation; waste and fraud coupled with excessive selling expenses; individual extravagance; social competition; labor unions; the tariff and the trusts; all of these factors and many others add to the increasing burden of the consumer. Moreover, the opposites of each of these causes are usually offered as solutions for reducing the cost of living. These solutions, however, are much like prescribing amputation as a cure for a broken arm. It is easy enough to know that the cost of living is increasing and to ascertain where our money is going; but it is another matter to get at the root of the evil.

The cause, Mr. Babson adds, underlying all of the various reasons for the increased cost of living, is the fundamental law of supply and demand; that is, the supply of and the demand for what is produced. It matters not whether you discuss gold, wheat or beef, in fact anything that is produced, it all comes down to the supply of, and demand for, these things. Now the demand is almost universally increasing as the population of the world increases, and also by reason of the fact that as the world becomes more civilized, its wants increase per capita.

Mr. Babson then tells us that if the cause is *demand overtaking production* which is caused by too many non-producers,

then the remedy consists in increasing the proportion of producers.

Mr. Babson cares not how many legislative committees investigate the subject, nor how many magazine articles thereon are published, nor how much the subject is discussed, for when all is over the cause which he has given will be found to be the real cause and the solution given the real solution. The increased cost of living is not alone in the United States as so many seem to think, but is found throughout the world where civilization has increased with the consequent increased wants and the falling off of producers.

THE OPTIMIST

There was once a man who smiled,
Because the day was bright,
Because he slept at night,
Because God gave him sight
To gaze upon his child;
Because his little one
Could leap and laugh and run,
Because the distant sun
Smiled on the earth, he smiled.

He smiled because the sky
Was high above his head,
Because the rose was red,
Because the past was dead!
He never wondered why
The Lord had blundered so
That all things have to go
The wrong way here below
The overarching sky.

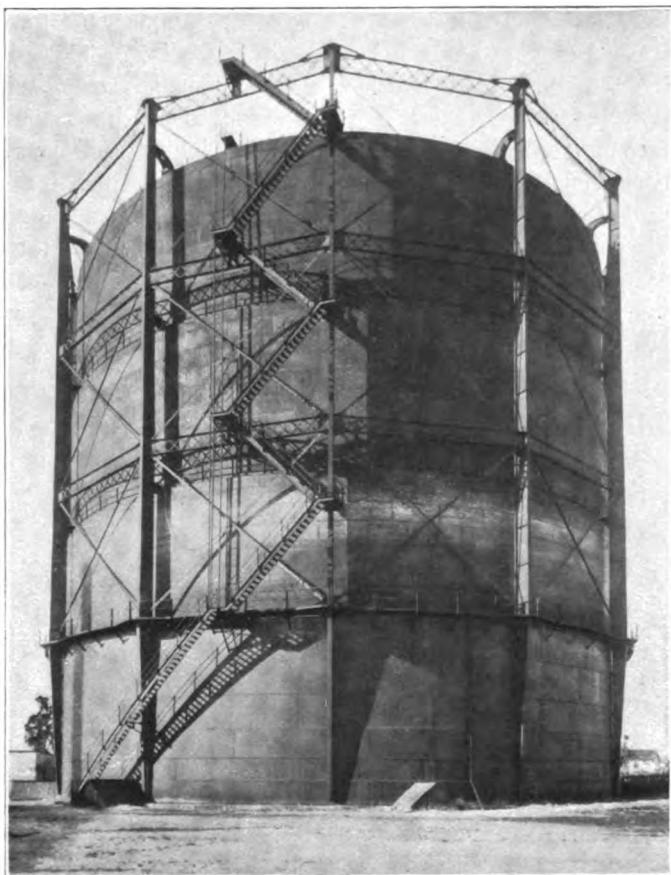
He toiled and still was glad
Because the air was free
Because he loved, and she
That claimed his love, and he
Shared all the joys they had!
Because the grasses grew,
Because the sweet winds blew,
Because that he could hew
And hammer, he was glad.

Because he lived he smiled,
And did not look ahead
With bitterness or dread,
But nightly sought his bed
As calmly as a child.
And people called him mad
For always being glad
With such things as he had,
And shook their heads and smiled.

—*Exchange.*

WRITES WITHOUT WASTE

The punster who said that Dixon's American Graphite Pencils are "all write," referred of course to the fact that the full seven inches of American Graphite "leads" remain unbroken—all write and no waste.



GAS HOLDER OF NEW JERSEY GAS COMPANY

Glassboro, N. J., is the place at which the photograph was taken from which our illustration above was made. The illustration represents a gas holder of the New Jersey Gas Company, a subsidiary company of the Eastern Light and Fuel Company of Philadelphia.

Our particular interest and satisfaction in connection with this New Jersey Gas Holder, is to record the fact that Mr. Smith C. Fisher of Bridgeton, N. J., painted it with Dixon's Silica-Graphite Paint.

"Gas Holder Painting" is an attractive little booklet which may save money for the company or individual interested in the subject. It illustrates a few of the prominent gas holders throughout the country painted with Dixon's Paint. Write for a copy today.

"KEROSENE" says *Motor Sense*, October 15, 1912, "with a little graphite added is a very good oil to use on valve stems on the exhaust side of an air cooled motor." In the same issue, *Motor Sense* advises that a graphite grease should be used in grease cups, universal joints and similar places on the motor car.

Mr. W. M. Carson, in the November 13, 1912, issue of *Horseless Age*, asks if the editor of that publication advises the use of flake graphite mixed with cylinder oil as a lubricant for the cylinders of automobile engines? The editor replies that graphite in the flake form is an excellent lubricant for engine cylinders, as it tends to fill up the small hollows of the cylinder wall and produces a perfectly smooth guide way for the piston.

Automobile Topics, October 5, 1912, says that "Springs that are squeaky may be cured by jacking up the body of the car

in such a way that the chassis hangs from the springs and separates the leaves and then apply flake graphite. A little on the point of a pen knife, distributed here and there on each leaf, will do the trick. In case the springs are stiff, it is probable that they are rusted and they will have to be taken apart. After dismounting the springs, separate the leaves and remove the rust with emery paper. Then apply graphite and re-assemble."

SILENT WOMEN

We wonder how many of our readers know of the strange community of silence which exists within a short distance from Biarritz, one of the centers of frivolity of the old world. There is found a community of women whose voices are sweet and musical and who pass their lives in unbroken silence, not as a penance for their sins, but of their own free will.

The community is known as the Convent of the Silent Sisters. It has existed for over a century. To the visitor the air of peace is impressive. There is an absolute atmosphere of rest about the convent. With downcast eyes and with an expression of perfect serenity in their eyes, the silent sisters go about their daily tasks unconscious of visitors. The hum and noise and laughter of the world does not disturb them. They are at peace with their maker; they are at peace with their fellow beings.

What a contrast to the waste of words of our every day life, the violent harangues on the highways, the bickerings of the bed room, the sly gossip in the corners, the vicious tirades from the rostrum and the noise of it all!

WITH other artificial things that are offered us and which are said by the promoters to be as good as Dame Nature can turn out, there now comes along synthetic milk which is the latest product of the chemical laboratory. It is a German discovery and the milk is said to have the same color as the animal liquid, and some of its advocates assert that it is more nourishing and more easily adulterated than the cow's product. Furthermore it is said to be profitably manufactured to retail at six cents a quart. Along with the artificial egg and some other things, it will probably in time give way to some other artificial product.

According to Washington, D. C., statistics, we drink \$2,000,000,000 worth of intoxicating liquors; we smoke \$1,200,000,000 worth of tobacco; we eat \$200,000,000 worth of candy. We absorb \$120,000,000 in soft drinks; \$100,000,000 in tea and coffee and chew \$13,000,000 worth of chewing gum.

There are other interesting statistics, but these will suffice.

THE WEAKNESS OF IRON

In regard to strength, durability and cheapness, iron is an excellent material, but the weak feature of it is its liability to corrode. When exposed to a moist exposure, it rusts.

Structures of iron which have to be exposed to air and moisture must, therefore, be protected.

Demonstrations covering a period of nearly fifty years, which have been carried on in all parts of the world and under most varying conditions, have placed Dixon's Silica-Graphite Paint as the standard protective coating for all metal surfaces.

A BUNCH OF BANANAS

Every reader of GRAPHITE has seen bunches of bananas hanging up, but probably never gave a thought as to how bananas are classed.

The standard market bunch of bananas is one with nine hands (each group of bananas on the stem of the bunch is called a "hand.") The price, which varies with the season of the year, is quoted at so much a hundred bunches or counts. A bunch of nine hands or more is called a "count;" one of eight hands is three-fourths, one of seven hands one-half, and a bunch of six hands one-fourth of a "count," so that four bunches of six hands each bring only as much as one of nine hands. Bunches with fewer than six hands are seldom exported.

CONCERNING BUSINESS LETTERS

We greatly fear that the gentle art of letter writing is something that is sadly neglected in these days of business rush. We are not making this remark on account of letters received by us so much as on account of some of the letters that we have noticed that have been dictated by some of our own people. There is a tendency to be extremely apologetical, and to very frequently use the word "beg" which reminds us of the following:

"A wand'ring Harper, scorn'd and poor,
He begg'd his bread from door to door."

One letter went very much like the following:

"We beg to acknowledge receipt of yours of the 15th, and beg pardon for not having made an earlier reply, and beg to advise you that we were not able to ship on the 10th as promised, but beg to say your goods will go forward on the 25th. Begging pardon for the delay, we are, ——"

There would seem to be at least one too many begs in the above. But why beg at all?

Above all a business letter should be simple in language, clear and distinct. It should never be written carelessly or hurriedly; furthermore, it should be carefully paragraphed and punctuated, that the different subjects may be separated and distinct and so punctuated as to leave no question as to what is intended. Few of our young men give the attention to letter writing that they should.

A GOOD WORD FOR DIXON'S BOILER GRAPHITE

SECURITY MUTUAL LIFE INSURANCE COMPANY

BINGHAMTON, N. Y., Jan. 2, 1913.

Joseph Dixon Crucible Company,

Jersey City, N. J.

GENTLEMEN:—Referring to yours of the 27th ult., I will say I have now used Dixon's Boiler Graphite No. 2 in our boilers for the last year in connection with compound. We put in about two ounces of the graphite with the compound daily. The mixture passes through the boiler feed pump and our hot water meter and then on to the boilers.

Our boilers are in fine shape. The graphite can be seen all over the sheets, tubes, heads and all. The little pieces of scale that we get all show the graphite very plainly.

But the best of all is the help we get on our boiler feed pump and the hot water meter. The latter was wearing very fast

and making us a great deal of trouble in re-calibrating and care. It has now run a year with absolutely no trouble, nor has it had to be re-adjusted in any way. The pump runs very much better, operates easier and smoother, and the packing wears much longer than it did, which of course means a saving in steam and consequently in fuel.

I do not think graphite is a cure-all by any means, but if it is used as it should be, it will undoubtedly remove a good deal of scale. In a new boiler I certainly do believe that *all scale* can be prevented, also that it will prevent pitting and grooving, reduce packing friction and be of great help generally. The benefits are so great that I shall certainly continue its use. The expense is so low it is not to be considered at all.

(Signed) ASA P. HYDE,
Chief Engineer.

WE HAVE always been of the opinion that birds migrated south on the approach of cold weather because they preferred, like many of us, a warmer climate, and were always sure of free transportation and probably good living on the way. We are now told that Professor E. A. Schaefer, F. R. S., has a new theory about the instinct that determines birds to migrate north and south. Professor Schaefer suggests that the north and south migrations are not due to the warmer and colder seasons, but to the "quest for daylight" by the birds to obtain sufficient food for their young. They have no sense of smell and must depend almost exclusively upon quick vision in detecting food, most of which is alive and fugitive. Professor Schaefer says:

"It is obvious that the proportion of the twenty-four hour cycle which can be utilized by birds for obtaining food becomes greatly diminished during the winter months in high latitudes, and may be reduced to nil within the arctic circle, while during the summer months the amount of daylight in high latitudes is proportionately increased."

"QUERIES"

Does ash make the best fire?

Is it "fir" to the Pacific coast?

Could burglars pick a hem-lock?

Is a ven-eer related to an engineer?

What color is red oak when it is green?

Does a dealer in buck-eye get the buck ague?

Should not bass-wood be good to make drums of?

Should not all dairy buildings be built of butter-nut?

If Cy cedar on the street, would Cy-press her hand?

Would hack-bury look well in a funeral procession?

When the farmer chased pigs with his dogs, did he sic-em-more?

When the white man whipped the Indian, do you think Locussed?

If the darkey butted the side of the house, would he have a black walnut?

Should a man who has been brought up in the beech woods know how to swim?

Do you think the above are chestnuts?—*Hardwood Record*.

Why do school boys who catch bass usually catch the birch? We pine to spruce up these chestnuts but wood it be poplar?—ED.

MY FRIEND

"I am the best pal I ever had
I like to be with me.
I like to sit and tell myself
Things confidentially."

"I often sit and ask me
If I shouldn't or I should.
And I find that my advice to me
Is always pretty good."

"I never got acquainted with
Myself till here of late.
And I find myself a bully chum
I treat me simply great."

"I talk with me and walk with me
And show me right and wrong,
I never knew how well myself
And me could get along."

"I never try to cheat me
I'm as truthful as can be,
No matter what may come and go
I'm on the square with me."

"It's great to know yourself and have
A pal that's all your own;
To be such company for yourself
You're never left alone."

"You'll try to dodge the masses
And you'll find a crowd's a joke,
If you only treat yourself as well
As you treat other folk."

"I've made a study of myself
Compared me with a lot,
And I've finally concluded
I'm the best friend that I've got."

"Just get together with yourself
And trust yourself with you,
And you'll be surprised how well yourself
Will like you if you do."—AUTHOR UNKNOWN.

EVEN the multi-millionaire finds the pencil a most useful medium for the transmission of his thoughts. The newspapers report that Mr. William Rockefeller has suffered since 1905 from a malady of the throat and that though unable to use his voice, except for a few moments at a time, he converses and makes known his wants with pencil and pad. We assume that the pencil is a Dixon's, for Mr. Rockefeller, like James J. Hill and all particular men, uses the best. It was said that General Grant, when president, wrote one of his messages to Congress with a Dixon S-M American Graphite Pencil.

FROM OUR BUFFALO BRANCH

The man who whispers down a well,
About the goods he has to sell,
Will never reap the shining dollars
Like he who climbs a tree and hollers.



"Ticonderoga," said Old Jerry,
"is where our boys did some great
scrappin' and that's the place where
Dixon's Flake Graphite comes from."

"Speakin' of fightin'," continued
Jerry, "Flake graphite has licked the
stuffin' out of old General Friction so
many times that it's got all right
thinkin' engineers rootin' for it like a
bunch of fans at a baseball game."

"I used to wonder how I got
along without Dixon's Flake Graphite
but we didn't use to have any super-
heaters until I got to runnin' Old 689
and broke all records on the road.
It was a lucky day for Jerry when I
came across that old Dixon ad and
wrote for the booklet and sample No.
190-R. R. They're still advertisin'
'em."

Joseph Dixon Crucible Co.
Established 1827.
JERSEY CITY, N. J.

GRAPHITE

VOL. XV.

MARCH, 1913.

No. 3.

Issued in the interest of Dixon's Graphite Productions, and for the purpose of establishing a better understanding in regard to the different forms of Graphite and their respective uses.

RAILROAD MEN, ATTENTION!

By L. M. STOCKING

First:—It is recognized throughout the whole industrial world that "one ounce of prevention is worth a pound of cure," and that "foresight never mourns, but hindsight is always in tears." The old-fashioned railroad engineer used to be anxious to make a name for economy by drawing small on the Appropriation Account for "Painting of Structures," but he lost his job when he had to requisition on a day that could not be postponed for a vast amount to replace a worn-out, rusted-out bridge, or other steel structure. The new fashioned engineer puts off indefinitely that "Replacing Charge," by keeping his structure up-to-mark with the Best protective paint procurable, the cost of which is

infinitesimal when compared with a new structure. This is the new system of economy whereby it can be proved that paint enables an old structure to give the same service as an entirely new structure.

Second:—There are paints and paints! That is to say, some are merely a shadow of the thing promised by the name. Some vary in quality. Some are cheaper. Some manufacturers prepare various grades and the user suffers through the ignorance of his employes, or the owner is thereby taken advantage of by contractors. Railroad men like to avoid all this by deciding on a standard paint of ONE QUALITY ONLY, for construction work and for maintenance painting.

Third:—There are manufacturers and manufacturers! The name counts. A reliable house is generally an old house, a firm which has won out by the tests of time and competition. "You cannot fool all the people all the time," the immortal Lincoln said, and the reliable paint manufacturers say the same thing regarding inferior products which win a temporary market by fancy advertising, false promises, or a lower price. The wise railroad man gives preference to the manufacturer whose goods are reliable and widely known, as invariably living up to advertisement.

Fourth:—Railroad structures are peculiarly subject to severe attacks from oxidation, decay and rust, and deterioration and the costly renewal of the structure, prevented by constant inspection, thorough cleaning, and a thorough painting with a *real* protective paint, that really does enable the

steel work to withstand the attacks of rust, brine, acids, heat, cold, gases and abrasion.

Fifth:—There is one silica-graphite paint that does this. The pigment is Nature's mixture, and therefore is a real mixture which does not settle. It is mined by only one company at Ticonderoga, N. Y., and the vehicle is the *best linseed oil* only. This paint has been manufactured for nearly fifty years; is used all over the world by leading railroads, both as a construction and maintenance paint on steel cars, signal apparatus, bridges, buildings, boiler fronts, etc. Are you a user and would you like references? Please write to the Joseph Dixon Crucible Company, Jersey City, N. J., regarding their Silica-Graphite Paint. The railroad engineer pleases his superior and the public by keeping his structures well painted, and Dixon's Silica-Graphite Paint is a protective paint that LASTS LONGER, and therefore it is the greatest Economy Paint known since the Egyptian Pyramids were erected to outlast Time and Wear.

ABOUT DIXON'S BOILER GRAPHITE

NEW YORK, Jan. 14, 1913.

Joseph Dixon Crucible Company,

Jersey City, N. J.

GENTLEMEN:—I feel it my duty to inform you of the results I have had from the use of Dixon's Boiler Graphite No. 2 in my horizontal boilers. I have been using it for some time and must say it is the best compound I have ever used.

We have always had to be careful of what we used in the boilers, as we need a fifteen pound pressure of steam to cook with. Since we have been using graphite, I find no trace of it coming through with the steam.

The means by which I pump it into the boiler are very simple; namely, a small tank is placed over the pump and just above the water-line of the heater. In this is put a bucket of water in which I have mixed a pint (about eight ounces) of the graphite. After cutting off the heater I pump this direct to boiler. The results are that my pump runs like a clock, my boilers are like the top of a stove and they are steaming easier than they ever did.

Yours very truly,

F. A. FISCHER, Chief Engr.,
Shults Bread Company, New York City.

EXPERIENCED

Gladys—"Why does Ethel believe in second sight?"

Marie—"Well, she said she fell in love at first sight."

ESTABLISHED 1827



INCORPORATED 1868

**JOSEPH DIXON CRUCIBLE CO.**

JERSEY CITY, N. J., U. S. A.

Miners, Importers and Manufacturers of Graphite,
Plumbago, Black Lead.**OFFICERS:***President*—GEORGE T. SMITH*Vice President*—GEORGE E. LONG*Secretary*—HARRY DAILEY*Treasurer*—J. H. SCHERMERHORN*Ass't Sec'y & Ass't Treas.*—ALBERT NORRIS**DIRECTORS:**

GEORGE T. SMITH

GEORGE E. LONG

WILLIAM MURRAY

EDWARD L. YOUNG

WILLIAM G. BUMSTED

HARRY DAILEY

J. H. SCHERMERHORN

OFFICES AND SALESROOMS:

NEW YORK SALESROOM, 68 Reade Street.

PHILADELPHIA SALESROOM, 1020 Arch Street.

SAN FRANCISCO SALESROOM, 155 Second Street.

CHICAGO OFFICE, 1324 Monadnock Block.

BOSTON OFFICE, 347 John Hancock Building.

PITTSBURG OFFICE, Wabash Terminal Building.

ST. LOUIS OFFICE, 501 Victoria Building

BALTIMORE OFFICE, 1005 Union Trust Building.

BUFFALO OFFICE, 72 Erie County Savings Bank Building.

ATLANTA OFFICE, Fourth National Bank Building.

EUROPEAN AGENTS,

Graphite Products, Ltd., 218-220 Queen's Road, Battersea, London.

GRAPHITOLEO LUBRICATES QUEER JOINT

At some time or other it has been the hope of every ambitious manufacturer of lubricants to emulate the example of Dame Nature by marketing a product to equal that wonderful secretive which lubricates the joints of the human body.

The nearest approach to a realization of this hope occurred recently at the New York Automobile Show. A Dixon representative who is not at all a believer in the supernatural, was approached with the request for a tube of Dixon's Graphitoleo. Upon inquiring for what purpose it was purchased, our representative was startled to be informed, in a serious manner, that its purchaser proposed to use it for lubricating the knee joint of his left leg.

Glancing furtively around and being reassured by the number of people about them, the Dixon man ventured to inquire if the stranger would have his purchase "scented" or take it with him.

"Oh, I'll take it with me," was the smiling assurance and as the stranger turned away the Dixon man noticed for the first time that he walked with a most suspicious limp and it dawned upon him that the stranger possessed a wooden leg.

"They ought to raid that joint," grumbled the Dixon man as the laugh subsided.

A SIGNAL ENGINEER writes us as follows in regard to the Dixon Graphite Air Brake and Triple Valve Grease for signal mechanism:

"Trial has been made of your samples of Dixon's Graphite Air Brake and Triple Valve Grease and results have been very satisfactory.

"We have no very great use for this lubricating grease on account of the very few points where we have air plants. However, in the future ordering of lubricants for such air plants, your valve grease will be given careful consideration."

FROM CRANK TO TAILLIGHT

GILLESPIE, ILL., Jan. 23, 1913.

*Joseph Dixon Crucible Company,**Jersey City, N. J.*

GENTLEMEN:—I have just finished reading your booklet, "Lubricating the Motor." This booklet should be in the hands of every user of motor cars or motor trucks; more than that, its contents needed.

I have used your graphite and greases for the past two years and will continue to do so, as I have had perfect lubrication and motor car satisfaction. For the past months I have used your products on an American underslung car, from the crank to the taillight. I have driven this car in this time over 4,200 miles in all kinds of weather, and over all kinds of roads at all speeds up to fifty-five miles per hour, and have never been laid up one second on account of lubrication troubles or an overheated engine. Your motor graphite gives the pistons a tight, smooth fit by veneering the pistons, rings and cylinder walls, which results in completely wiping down the oil of the cylinder walls after each stroke of the piston, allowing very little oil to get into the combustion chamber proper, hence I have had to clean carbon from the motor but once in the 4,200 miles running. The use of your products has been an economy, as I have used but 6½ gallons of lubricating oil, and I have at all times had a quiet, powerful and sweet running motor.

It is hard to believe, from my experience, that a good car, whose bearings were lubricated with your products, would ever wear out.

I am pleased to testify as to the merits of your products as I have always found that they are the "right stuff in the right place."

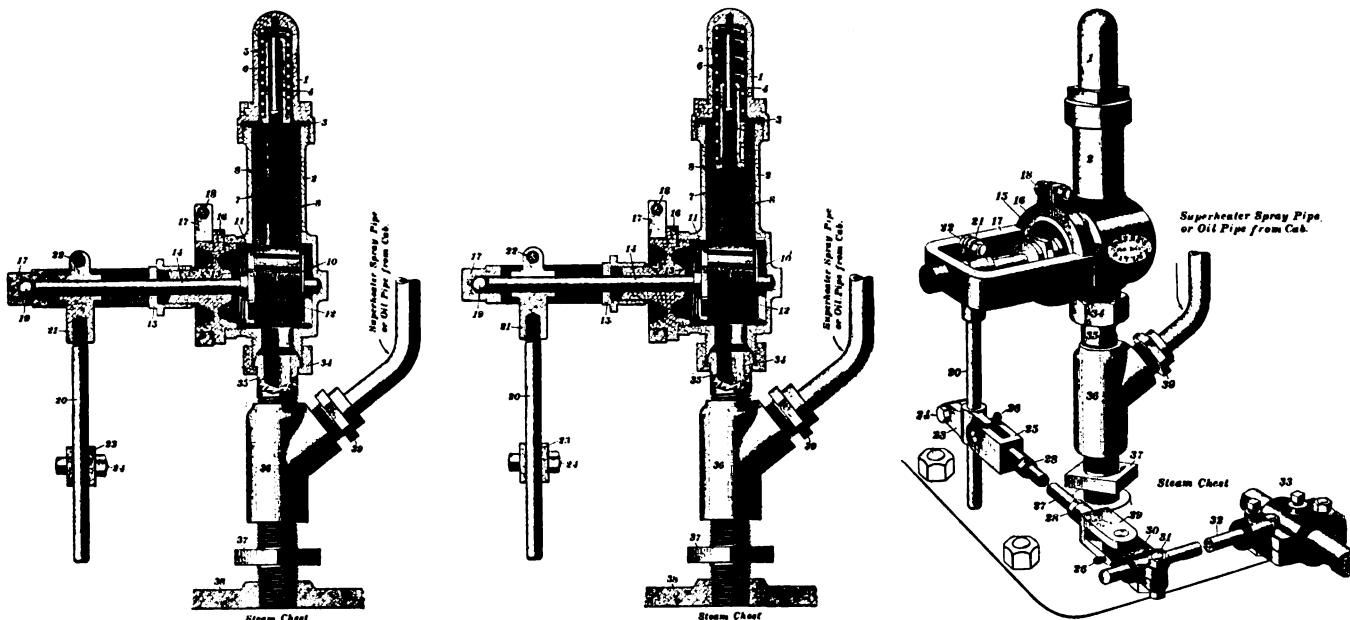
Yours very truly,

(Signed) F. A. TRAHIN.

DOWNY

He (nervously)—"Er-er, Margaret—er-er, there's something has been trembling on my lips for the last two months."

She—"Yes, so I see—why don't you shave it off?"



FLAKE GRAPHITE LUBRICATOR INDICATES SAVING OF \$260,000

D. L. & W. R. R. Tests New Lubricator

The following editorial, appearing in a recent issue of the *New York Times*, is reprinted for the benefit of those whose notice it escaped:

SAVING THE PENNIES

Louis D. Brandeis would probably be highly gratified at the results of an efficiency experiment recently carried out by the Lackawanna Railroad. On a big superheater engine of the Pacific type, which hauls the Lackawanna Limited between Scranton and New York, the company tried out a device for automatically supplying graphite to the cylinders. Records made during the test indicated a consumption of 12.37 pounds of coal per car mile without the graphite and 11.43 pounds with it, or a saving of 7.7% in fuel. Based on the company's coal bills for the past year, this seems to point the way to an annual saving of \$260,000.—*New York Times*.

The graphite lubricator referred to above is the invention of L. S. Watres and is manufactured by the National Graphite Lubricator Company, Scranton, Pa. It is designed for the lubrication of locomotive valves and cylinders. The accompanying illustrations, the first two of which are sectional views showing the graphite tube filled and partially fed out, give an excellent idea of the appearance of this device.

This lubricator is intended to distribute a small amount of Dixon's Flake Graphite on the walls of the valve chest and cylinder each stroke of the reciprocating parts. The lubricator is mounted on the top of the valve chest and motion is obtained from the valve stem or combination lever of the valve motion. The graphite, which is in the form of pressed cylinder, is fed down upon a grinding wheel which makes a part of a revolution each stroke. A small amount of fine flake graphite is thus dropped into the steam space.

Few will find objection to the use of graphite, and the good results obtained by its use are well known; the difficulty, heretofore, has been to properly feed the graphite. The use of Dixon's Flake Graphite is particularly beneficial in connection with superheater engines where lubricating difficulties have developed.

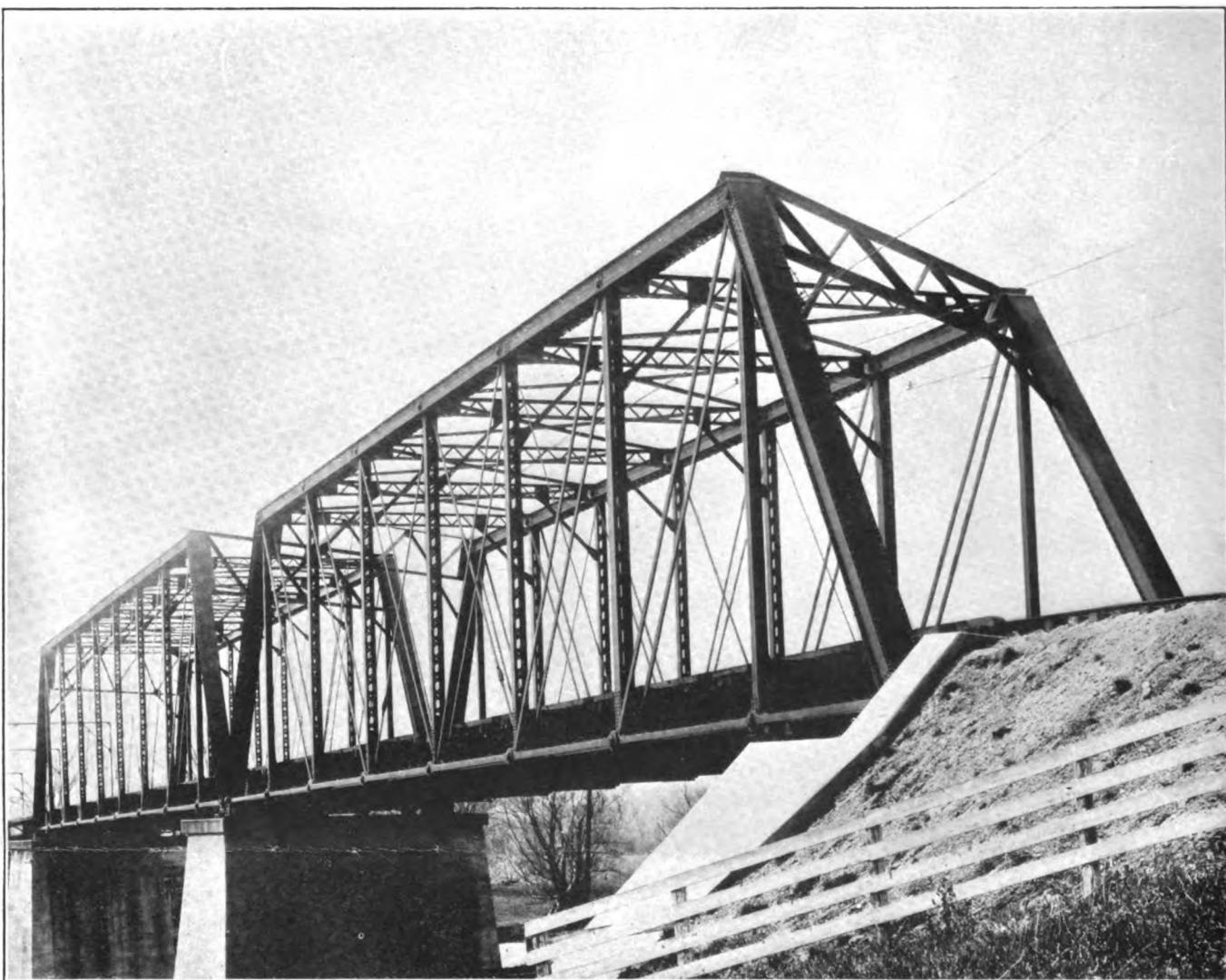
The device in question is in use on a number of locomotives of the Delaware, Lackawanna and Western Railroad, where it has proven very successful in reducing valve troubles, steam blows and excessive friction. A series of tests, as reported in the *Times'* article above, of the lubricator on a superheater of the Pacific passenger type, which hauls the Lackawanna Limited between Scranton and New York, shows a saving of 7.7% in fuel. The coal consumed in an engine of this type equipped with a lubricator was weighed and the amounts carefully tabulated, as against the same locomotive not equipped with a lubricator. The number of single trips without the lubricator was eleven and the average coal used per car mile was 12.37 pounds. With the lubricator the number of single trips was seventeen and the average coal per car mile was 11.43 pounds. In percentage, using 100 as the basis without the lubricator, the amount of coal consumed with the lubricator, was 92.3, or a saving per car mile of 7.7%.

Equally startling results are shown by a comparison of the valve motion repairs of engines of this type, with and without the flake graphite lubricator. Over the same period of time, engines without the flake graphite lubricator required from six to nine cylinder packing rings and as many as ten valve packing rings, while the engine equipped with the lubricator, neither cylinder nor valve packing rings were required.

It is claimed that the temperature of over 600 degrees in the cylinder of the superheater locomotive causes volatilization of ordinary cylinder oils. As Dixon's Flake Graphite will not volatilize, and by the lubricator is automatically fed into the cylinder, it insures constant lubrication, with the cylinder oil being merely an adjunct.

Results on the stationary type of lubricator have shown on compressors and machines of that nature a saving of as much as 90% in oil consumption, using a very small quantity of Dixon's Flake Graphite. There is, no doubt, an equivalent saving in fuel, except that it is much harder to produce actual results where several pieces of machinery are connected to one battery of boilers than it is in a unit steam plant such as a locomotive.

DIXON'S graphite publications sent free upon request.



**ROCHESTER, SYRACUSE AND EASTERN
ELECTRIC RAILROAD BRIDGE AT
LYONS, N. Y.**

The above illustration shows what is known as Bridge No. 4 on the Rochester, Syracuse and Eastern Electric Railroad, a double track road, eighty-six miles long and which is part of the Beebe System of trolley roads. The length of this bridge, which crosses the Erie Canal and Ganarga Creek at Lyons, N. Y., is 992 feet. According to Mr. W. A. Steckel, Road Master, Dixon's Silica-Graphite Paint has given remarkable service not only upon this bridge at Lyons, but upon many others included in the Beebe System.

**PORtUGUESE AND SPANISH IN AMERICAN
SCHOOLS**

Portuguese as well as Spanish, according to *Daily Consular and Trade Reports*, should be taught in the schools of the United States, in order to prepare for increased trade relations with Latin America after the opening of the Panama Canal. This statement is made by Mr. William A. Reid, an investigator of Latin American conditions, in a special report to the Southern Commercial Congress.

Portuguese for Brazil and Spanish for the other countries of South America, are described as the key to commercial success on the southern continent.

"With these two languages," says Mr. Reid, "the young American business man will be in a position to transact business with twenty republics of Latin America." In other words, he will be able to take advantage of the abounding commercial opportunities of the next few years.

CANADIAN WEATHER

Mr. H. E. Westervelt, the western Canada representative of the Dixon Company, recently paid his annual visit to the factory and home office and after he had told about one of his many interesting experiences to a group of Dixon girls, he was somewhat nonplussed to have one of his pretty listeners exclaim:

"Do you have reindeer in Canada?"

"No, darling," he answered, regaining his composure, "at this season it always snows."

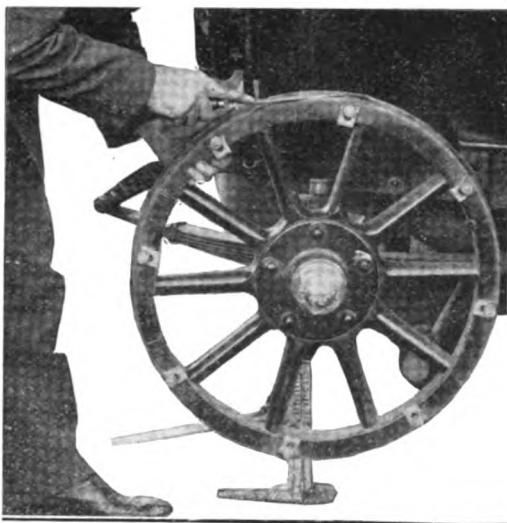
OTHER CITIES PLEASE TAKE NOTICE

A large board sign in Jersey City advertises a certain beer and tells us to drink that particular brand

"FOR HEALTH, STRENGTH AND PURITY."

We have often wondered why our politicians, policemen and city fathers were so much superior to those of other cities; now we know why.

DIXON'S MOTOR GRAPHITE FOR AUTOMOBILE RIMS



All automobile rims of the present day are made of steel and will therefore rust unless something is done to prevent it.

The automobile tire will rust on any rim, especially after long service. When driven during hot weather the beads of the tire become partially hardened to the rim, rendering it very difficult to remove the casing from the rim.

Rust is one of the elements which accelerates the decomposition of rubber, and is especially detrimental to inner tubes and to the fabric which gives strength to the tire. Decomposition of automobile tires outside of the wearing in service is caused almost wholly by the oxidization of the rubber.



It has been found from experience that a paste made of Dixon's Motor Graphite and water applied to the tire seat of the rim is effective in preventing rust for eight to ten months after application. In addition to preventing the rust from shortening the life of your inner tubes and casings, Dixon's Motor Graphite, mixed to a paste with water, will prevent tires from rusting and sticking to the rims. Even after eight or ten months of hard service, tires may be changed easily and quickly and without injuring the rims. We suggest that when changing tires, and especially when doing so in your garage, that you examine your rims and that if a coat of rust has formed, it be scraped off and the inside of the rim polished with a piece of sand paper or emery cloth, and a coat of graphite applied to the rim before again mounting the tire.

Although not generally known, it is a fact that the wear of inner tubes is caused by chafing against the casings. It has

been demonstrated that Dixon's Motor Graphite (dry), if placed between the inner tube and casing, will entirely eliminate this friction and increase the life of the inner tube.

Dixon's Motor Graphite is much superior to talc or soap-stone for this purpose, because it is an unctuous, inert lubricant, having no injurious effect upon rubber.

Dixon's Motor Graphite is used in many other places about the automobile. Every motorist should know more about this invaluable lubricant as well as other Dixon Graphite Automobile Lubricants.

FOR DIXON GRAPHITE BRUSHES

One of our customers sends us a very interesting letter in regard to the Dixon Graphite Brushes.

"Your card of a few days ago just at hand and brushes also received from Jersey City. I am pleased very much with them and have not had a minute's trouble with my generator since I put them on. My power is almost half better than before and I will never use another brush as long as I can obtain a Dixon Brush. I will from time to time recommend them to others.

You will find \$7.00 (seven dollars) in this letter for a duplicate order of the same kind of brushes. Send them by Parcels Post.

Hoping to get them soon and thanking you for your past favor, I remain, ——"

The moon is being very unjustly blamed for the early Easter this year and for compelling us to take the first of the year's holidays in bleak and windy March. But the real moon is really blameless in this matter, as the date of Easter is dependent on an imaginary moon, the phases of which occur in obedience to a set of tables drawn up by order of Pope Gregory XIII, and on which the prayer book rules for finding Easter are based.

A study of these complicated rules induces a feeling of amazement that so much ingenuity should have been expended to arrange for a constantly varying festival which, being a celebration of an historical event, seems to demand a fixed date for its observance. The explanation is that the Christian festival of Easter, though instituted by the early Christians—mainly Jewish converts—as a commemoration of the Resurrection, was purposely made by them to correspond in point of time with the Passover, and the Passover depended on the moon from its association with the fourteenth day of the lunar month Nisan, which was also, on the authority of three of the four Gospels, the date of the Last Supper.

—From a German Paper.

FRA HUBBARD ON GRAPHITE LUBRICATION

"Transportation," says Elbert Hubbard in the *Goodrich*, "is the second most important thing in the world and he who lubricates transportation is a world builder, a benefactor of his kind and will live in the hearts of humanity."

Inasmuch as the Fra wrote the essay, "Joseph Dixon, The World Maker," and, we are told, wrote it with one hand, it is no doubt true that Joseph Dixon was the man that the Sage of East Aurora refers to and that Dixon's Graphite Lubricants are the lubricants that will live in the hearts of humanity even as they last in more humble places.

3558

GRAPHITE

March, 1913.



COMMERCIAL NATIONAL BANK BUILDING, SHREVEPORT, LA.

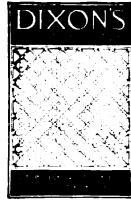
Shreveport, the second city of Louisiana, is also one of the fastest growing municipalities of that State. Evidence of its prosperity is reproduced upon the opposite page. The illustration represents the Commercial National Bank Building, which, outside of buildings in New Orleans, Dallas and Little Rock, is the tallest and largest building in that section of the country.

This modern office structure, which is also the new home of the Commercial National Bank, is the result of plans drawn by George R. Mann, architect, Little Rock, Ark. The building is 160 feet high and occupies a frontage of over 150 feet on the corner of Market and Texas Streets, two of Shreveport's main thoroughfares.

Seventy-seven thousand square feet of floor space and 216 offices are contained in the Commercial National Bank Building, all of which are supported by about 450 tons of steel beams and girders, which in turn are protected against rust and decay by Dixon's Silica-Graphite Paint. The selection of Dixon's Paint was made because of the excellent service it is giving upon all kinds of steel, iron and other metal structures. Manufactured for over fifty years in four colors and *one grade* only from Nature's own pigments, Dixon's Silica-Graphite Paint offers the most durable resistance ever obtained from a protective paint.

Stewart & McGhee of Little Rock, Ark., were the general contractors, and the Virginia Bridge and Iron Company, Roanoke, Va., were the steel contractors for the Commercial National Bank Building.

A NEW GRAPHITE PRODUCTION CATALOGUE



The largest and most complete production catalogue ever issued by the Dixon Company is now being mailed to the thousands of manufacturers, jobbers, purchasing agents and others interested in graphite, crucibles, paint, lubricants, pencils and other productions of the Dixon Company.

Though over one hundred pages of type and illustrations are used, this catalogue does not attempt to carry a full description of the entire Dixon line and only a few of the many hundreds of Dixon's American Graphite Pencils are listed.

A peculiar value is attached to this production catalogue, inasmuch as it serves to acquaint those who are already users of one form of graphite with its many other forms and uses. If you are particularly interested in graphite products you are invited to send for a copy of this catalogue.

THE PARCEL POST

Users of the parcel post will be glad to hear that it is now permitted to enclose with goods a bill or invoice bearing the usual trade descriptions, prices, etc., but nothing in the nature of a letter or personal communication.

WHILE we believe that there is a vast deal more courtesy and politeness in business today than existed many years ago,

yet even so, we might take some lessons from the opposing Mexican generals.

When the surrender of Vera Cruz was demanded by General Beltran, his demand was couched in most polite terms, concluding with the intimation that if the rebels did not surrender, duty would oblige the Federal commander to use force.

General Felix Diaz, replying to the note, thanked General Beltran for the polite form of the communication, and said he was sorry that the situation compelled him not to surrender and obliged him to offer a forcible defense.

PENCIL QUERIES

If Uncle Sam made plans against the Ambassador—
Would Domino, and tell his Cabinet?

If the Anglo-Saxon made love to the Traveler—
Would Continental?

If the Stenographer booked passage for Europe—
Would Order Book too?

If the Student fell from the Aeroplane—
Would Base Ball?

If the Secretary made Advance towards the Beginner—
Would Maryland on him?

If Cosmos go to High School—
Would Palisade him?

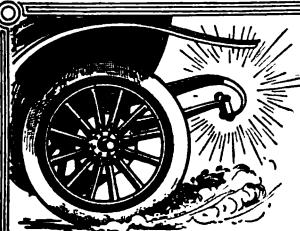
—O. E. HAWKINS.

SUPERIOR, WIS., Dec. 30, 1912.

EDITOR GRAPHITE:—Your monthly publication is read with interest every issue. Many of the articles are clipped and referred to various foremen and engineers.

Yours truly,

SUPERIOR WATER, LIGHT AND POWER CO.
By O. D. SECHEVERELL, Secy.



**Stop
That
Squeak**
with a little

**DIXON'S
MOTOR GRAPHITE**
(*Pulverized Flake*)

Work in between the spring leaves and on the bolts Dixon's Motor Graphite mixed with oil. Stops the noise for good—prevents rusting.

Dixon's Motor Graphite is an ideal lubricant, for it produces on bearing surfaces a tough, veneer-like coating of marvelous smoothness which prevents metallic contact—reduces friction—and does away with hot bearings.

You will get more power from your engine, your car will run quietly—your lubricant and repair bills will be less, if you use Dixon's Motor Graphite in every part of your car.

Mix it with your own choice of lubricants or we will do it for you, as we manufacture a full line of greases containing Dixon's Motor Graphite.

Ask your dealer for Dixon's Graphite Lubricant No. 877—a highest quality mineral grease scientifically combined with Dixon's Motor Graphite. Fine for differentials and transmissions. More economical than plain oil or grease.

Send name and model of car for free book, "Lubricating the Motor."

JOSEPH DIXON CRUCIBLE CO. D X N Jersey City Estab. in 1827 New Jersey





DAVE LEWIS FINDS CAR IN PERFECT CONDITION

Dave Lewis, one of the speed kings of Eastern tracks, again writes an enthusiastic letter concerning his experiences with Dixon's Graphite Automobile Lubricants. As his letter indicates, the post-season examination of his car was made after many fast and thrilling races in which he emerged victor more times than he was defeated.

NEW YORK CITY, Dec. 12, 1912.

*Joseph Dixon Crucible Company,
Jersey City, N. J.*

GENTLEMEN:—I have used your Graphite Automobile Lubricants for the past three years. They have reduced friction, prevented wear and increased the speed of the different cars I have driven.

I have just taken down my Stutz Car that I drove in all the races of the past season, and I find every ball race, every bearing, every pinion perfect, and if anything, in better condition than at the start of the season.

I have never used anything in this car other than Dixon's Graphite Lubricants, and I wish to assure you that I would not consider using anything else in my future races, also I will cheerfully recommend your goods to anyone who wishes to properly lubricate their car. Very truly yours,

(Signed) DAVID LEWIS.

DIXON'S graphite publications sent free upon request.

TRANSLATED FROM THE GERMAN

Leipziger St., 20-21,

BERLIN, W., Feb. 2, 1913.

Referring to samples of No. 2020 Order Book Pencils which I received from you through an advertisement in the *Dry Goods Economist*, beg to advise you that these have been extraordinarily satisfactory.

The great saving in the use of these pencils made it impossible for me to advise you sooner how very much satisfied I was with the same.

Very truly yours,

LANDESHUTER LINEN AND WEAVING MILLS.

**AMERICAN INSTITUTE OF ELECTRICAL
ENGINEERS**

WORCESTER POLYTECHNIC INSTITUTE BRANCH

WORCESTER, MASS., Feb. 7, 1912.

Joseph Dixon Crucible Company,

Jersey City, N. J.

GENTLEMEN:—GRAPHITE for December 1912 and January 1913 have been received and distributed to the members of the branch.

In behalf of the members of the branch, I wish to thank you for the frequent consignments that we receive.

Very sincerely yours,

(Signed) GEORGE I. GILCHREST, Secy.



WINS HILL CLIMB WITH DIXON'S LUBRICANTS

Mr. A. G. Dale, the manager of the Ellis Car Company, Greenville, S. C., represents in North and South Carolina the selling interests of three manufacturers of automobiles. His firm also does a large wholesale business in automobile supplies.

It seems, however, that Mr. Dale is not satisfied to be a "bench" manager for automobile manufacturers, but insists upon getting into the game himself and demonstrating what the cars he sells can do.

Recently he entered a Nyberg Car in a free-for-all hill climb at Asheville. The car was lubricated with Dixon's No. 677 Graphite Automobile Grease in the transmission and in the differential, and Dixon's Graphite Cup Grease No. 5 in wheels, universal joints and the grease cups. The Nyberg and its owner were victorious and shortly afterwards entered another meet at Greenville, S. C., where the car not only won the class in which it was entered but duplicated its previous performance by winning the free-for-all climb.

Mr. Dale is naturally pleased with the assistance which Dixon's Automobile Lubricants gave to his car, as his letter which follows, indicates:

ELLIS CAR COMPANY, INC.

GREENVILLE, S. C., Nov. 23, 1912.

Joseph Dixon Crucible Company,

Jersey City, N. J.

GENTLEMEN:—Your favor of November 22, addressed to our Mr. Dale has been received, and replying beg to say that the Nyberg, which was lubricated throughout with Dixon Lubricants, won both the free-for-all events in which it was entered.

We cannot say too much for your lubricants. The writer, who has had several years experience in the business, has used them before and would not think of using anything else when anything was at stake.

With wishes for your success in getting all of the other boys in line, we are,

Yours truly,

ELLIS CAR COMPANY,
(Signed) A. G. DALE.

LUBRICATING AUTOMOBILE CHAINS

Motoring Department, *The Globe*.—Will you kindly advise the best way to clean the chains on my car? I have been advised several ways but have never obtained good results. What method do you approve?—L. STONE.

It is impossible to clean chains properly without taking them off. They should be thoroughly scrubbed in kerosene or gasoline until all the foreign matter is removed. To clean them thoroughly they should then be boiled in order to remove the dirt from the various bearings.

When thoroughly cleaned and dried they should be boiled in a mixture of tallow and graphite. When this is done and the chains are allowed to dry, each small bearing in the chain receives a coating of lubricant. After replacing the chain it is sometimes advisable to put on an additional graphite compound in order to reduce the noise of the chains working on the sprockets. The former operation, however, cleans and lubricates all the small bearings of the chain which otherwise are not affected by the usual method of cleaning and lubricating.—*N. Y. Globe*.

LUBRICATING THE MOTOR

The second edition of "Lubricating the Motor," published by the Joseph Dixon Crucible Company, Jersey City, N. J., offers to all owners and drivers of motor driven vehicles the most complete and valuable information concerning graphite lubrication that has yet been published.

A chart with recommendations for lubricating each part of the car is one of the features of this booklet. Illustrations of noted speed kings together with their words of praise are of especial interest to followers of the racing game. A short description of one of the most remarkable automobile trips ever made is also a feature, together with special chapters devoted to the lubrication of each part of the car and to motor boats and motor cycles.

A copy of this booklet will be sent upon request.

THE MAN WHO WINS

The man who wins is an average man,
Not built on any particular plan,
Not blest with any peculiar luck—
Just steady and earnest and full of pluck.

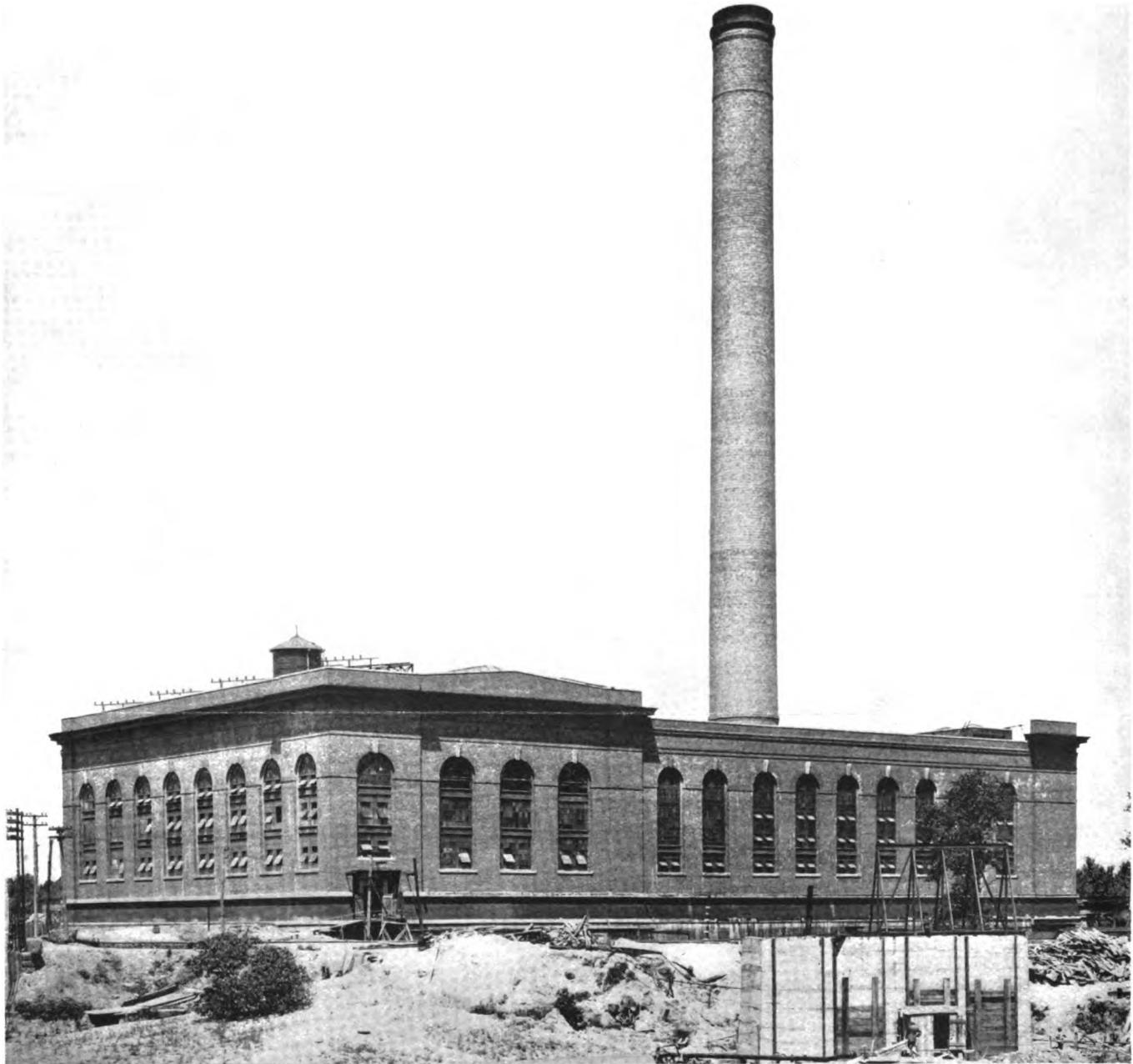
When asked a question he does not guess,
He knows and answers "No" or "Yes";
When set a task the rest can't do,
He buckles down till he puts it through.

Three things he's learned; that the man who tries
Finds favor in his employer's eyes;
That it pays to know more than one thing well;
And to hold the tongue when others tell.

So he works and waits till one fine day
There's a better job with better pay;
And the men who shirked whene'er they could
Are bossed by the man whose work made good.

For the man who wins is the man who works,
Who neither labor nor trouble shirks,
Who uses his hands, his head, his eyes,
The man who wins is the man who tries.

—SELECTED.



POWER PLANT OF TERRE HAUTE, INDIANAPOLIS AND EASTERN TRACTION COMPANY, INDIANAPOLIS, IND.

This very large and well equipped power plant, which provides power for Indiana's most important traction system, is built in the most substantial way possible. The steel work contained in this structure is protected against arduous conditions of attack by dampness and alkalies and other rust-producing agencies with a shop and field coat of Dixon's Silica-Graphite Paint.

The Bedford Stone Construction Company were the general contractors, the Brown-Ketcham Iron Works (successors to Noelke-Richards Company) were the erectors of this modern power plant.

DIXON's graphite publications sent free upon request.

FROM A PROMINENT BREWING COMPANY

We have been using your pencils for years. Your "Anglo-Saxon" No. 2-1802 is the best pencil we ever handled and we think we know a thing or two about pencils.

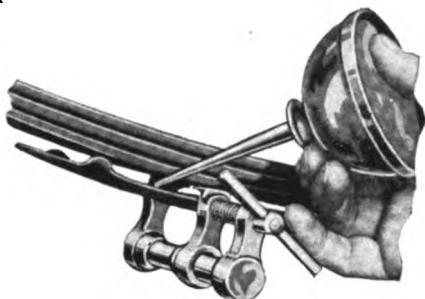
THOSE of our readers who are familiar with the metric system can tell when they are too fat by the following rule:

A person is stout or strongly built when his weight amounts to as many kilograms as the number of centimetres by which his height exceeds one metre—for instance, sixty kilograms for a person whose height is one metre sixty centimetres. Obesity begins when such a person weighs ten kilograms more than he should do according to this rule—that is, seventy kilograms instead of sixty kilograms; hence an individual whose height is one metre sixty centimetres is stoutly built if he weighs sixty kilograms, and he begins to be obese on weighing upward of seventy kilograms.

EASY RIDING FOR YOUR CAR

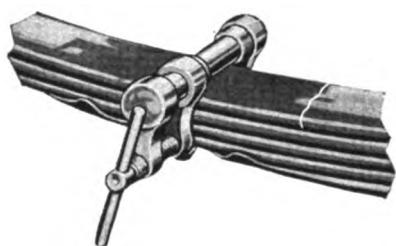
In our January issue appeared an article, illustrated, advising the jacking up of your car and using a "chisel or any solid piece of metal to pry the springs apart" to insert Dixon's Motor Graphite in case of squeaking. Since then our attention has been drawn to a spring leaf spreader, manufactured by the Spring Leaf Lubricator Company of Ann Arbor, Michigan, by the use of which the leaves of springs are simply, quickly and easily opened without damaging your springs with a chisel or bruising or knocking the skin from your knuckles.

This device is also used as a temporary repair clamp, binding a broken spring more effectively, it is claimed, than any other clamp.



SEPARATING THE LEAVES

We are informed that this attractive and very necessary tool is adopted by the Cadillac Motor Car Company of Detroit, who suggest the use of graphite as described in our January issue. Other manufacturers, we are informed, have also adopted this tool as a part of the regular equipment for their 1913 output.



CLAMPING A BROKEN SPRING

The owner of a car knows or should know that in order to obtain the greatest comfort from his car, its springs should be periodically lubricated. The leaves should be separated and Dixon's Motor Graphite (or Dixon's Motor Graphite mixed with oil) inserted. Your car will ride much easier and the annoying squeaking of your springs will never occur. It also adds to the life of your springs and eliminates breakages. When the leaves are not lubricated with Dixon's Motor Graphite, they rust and adhere to each other. Your car then rides hard, squeaking occurs and breakages become frequent. Therefore, keep your springs lubricated and avoid these troubles.

FROM A BIG PACKING COMPANY

We have yours of the 30th, likewise samples of the No. 2020 Order Book Pencils.

They are very good indeed and we enclose our formal order for five gross of these at the price named.

DIXON's graphite publications sent free upon request.



"Flakes," said Old Jerry, as he gazed meditatively at the falling snow, "used to bother the boys considerable. What, with the cold weather, gummy oil and the heavy storms, it was almost impossible to keep time."

"Flakes," continued Jerry, "are all right if you know which kind to use. With a can of flake graphite Old 689 used to bore through those snow banks as if nothin' but white clouds was obstructin' the way. 'It's graphite, boys,' I used to say, 'and nothin' but Dixon's Flake Graphite will do it.' And then I used to pull out that old Dixon ad and read them the magic line: Write for Graphite Products for the Railroad and Sample No. 103."

Joseph Dixon Crucible Co.

Established 1827

JERSEY CITY, N. J.

A Sure Cure for Slipping Belts

Belts that are dirty, clogged, glazed, dried out or otherwise neglected are a positive loss in dollars and cents.

Power losses and expensive renewals may be reduced to a mere fraction of their former costs by the proper care of belting.

Dixon's Traction Belt Dressing and Leather Preservative embodies in paste form the valuable ingredients that cannot be reduced to solid forms but that are necessary to obtain a perfect preparation to withstand the constant destructive influence of dust, dirt, fumes or moisture.



Write today for this free sample of Dixon's Solid Dressing

Dixon's Solid Belt Dressing is the best substitute for Dixon's Traction Belt Dressing. It is quick, convenient and superior to any other solid dressing on the market. The Dixon booklet "The Proper Care of Belts" contains much valuable information to belt users. Start an investigation by writing for a free copy of this booklet and we will include a liberal free trial sample of Dixon's Solid Belt Dressing.

Write today for liberal free sample and booklet No. 190-0

Established in 1827

Joseph Dixon Crucible Co.
JERSEY CITY, N. J.

GRAPHITE



VOL. XV.

APRIL, 1913.

No. 4.

Issued in the interest of Dixon's Graphite Productions, and for the purpose of establishing a better understanding in regard to the different forms of Graphite and their respective uses.

A SPRING REASON

By L. M. STOCKING

Spring is here and so are the poets. One of them is Alfred Noyes, who has come from England to read his vernal songs to admiring Americans. Some rhymes carry reason with them, like Tennyson's and Kipling's for instance. Some are only and wholly rhyme; take out the jingle and you have destroyed their "raison d'être!" They contain no message and therefore have no reason for existence. It is the message, therefore, that lasts. Some forceful men, however, never use rhyme in giving their reasons. We instance Governor Fielder of New Jersey, and President Woodrow Wilson, who came out of New Jersey. Yet their message is listened to, far and wide. We modestly believe that we belong to the latter class. We appeal to a wide need, and we too have a real springtime message to send out from New Jersey.

We are just as serious as a Lent preacher who says in his spring sermon, "get your house in order," or a statesman who says, "repair your laws." Is your exposed metal work, such as fences, smokestacks, bridges, trolley poles and trucks, steel cars, etc., overhauled after the long and arduous winter, and protected against the corrosive dangers and wear of the coming year? Do you use a *longer service* protective paint? Do you know the ideal protective qualities of Nature's mixture of silica and graphite, alone mined at the Joseph Dixon Crucible Company's mines at Ticonderoga, N. Y.? You should be a user of what the experienced have adopted after exhaustive endurance tests. It is Dixon's Silica-Graphite Paint, made in New Jersey, the State which provides everything that those who are wise call for, from presidents to protective paint.

AN ADVERTISING STORY

An advertising manager at a Sphinx Club dinner in New York told an advertising story.

"A man," he said, "entered a shop one bitter cold day and bought a woolen muffler. When he opened the muffler he found inside of it the photograph of a beautiful girl, together with a note saying:

"If you are single, please write to me."

A name and address followed, and the man smiled. He

was single and he put the photograph on his sitting room mantel. There, every evening, looking up from his book he beheld it. It was very beautiful, and in a week he had fallen head over heels in love.

"So he wrote to the girl. Another week passed, a week of anxious, nerve racking suspense. Then the lovesick man received this crushing letter:

"Sir:—The Mary Smith to whom you wrote was my grandmother. She died nine years ago, aged eighty-six. Yours truly."

"Our heartbroken bachelor, on looking into this strange matter, found that he had foolishly bought the muffler from a dealer who didn't advertise."—*New York Herald*.

DIXON'S PAINT IN A CLASS BY ITSELF

Joseph Dixon Crucible Company,

Jersey City, N. J.

GENTLEMEN:—A little over five years ago I purchased some of your Graphite Paint, which was applied to a wrought-iron fence railing, and I thought that you would be interested to know that after standing the exposure of the elements, and the extremes of heat and cold for over five years, an examination of the iron railing, which was painted with your Graphite Paint, shows that it has stood the severe test much better than any other paint I have ever used during the past quarter of a century.

Its adhesive properties, its durability and elasticity, in my judgment, make your Graphite Paint a most valuable protective agent for all structural or metal work exposed to the elements, and should you at any time care to refer to me, I shall be pleased to place on record my experience in regard to the merits of your product, which I consider in a class by itself.

I have used and tested a large number of paints, the makers of which all claimed some superiority over any other when applied to structural work, and I can truthfully state that none has given me the satisfaction that Dixon's Graphite Paint has done; and it affords me pleasure to tender to you, quite unsolicited, this recommendation.

Respectfully yours,

(Signed) ALFRED W. SMITH,
Chemist.

"ADVERTISING is the voice of business. Some business can get along without advertising just as some men can make a living, although dumb. But both are uphill jobs."

ESTABLISHED 1827



INCORPORATED 1868



JOSEPH DIXON CRUCIBLE CO.

JERSEY CITY, N. J., U. S. A.

Mine^s, Importers and Manufacturers of Graphite,
Plumbago, Black Lead.

OFFICERS:

President—GEORGE T. SMITH

Vice President—GEORGE E. LONG

Secretary—HARRY DAILEY

Treasurer—J. H. SCHERMERHORN

Ass't Sec'y & Ass't Treas.—ALBERT NORRIS

DIRECTORS:

GEORGE T. SMITH

GEORGE E. LONG

WILLIAM MURRAY

EDWARD L. YOUNG

WILLIAM G. BUMSTED

HARRY DAILEY

J. H. SCHERMERHORN

OFFICES AND SALESROOMS:

NEW YORK SALESROOM, 68 Reade Street.

PHILADELPHIA SALESROOM, 1020 Arch Street.

SAN FRANCISCO SALESROOM, 155 Second Street.

CHICAGO OFFICE, 1324 Monadnock Block.

BOSTON OFFICE, 347 John Hancock Building.

PITTSBURG OFFICE, Wabash Terminal Building.

ST. LOUIS OFFICE, 501 Victoria Building

BALTIMORE OFFICE, 1005 Union Trust Building.

BUFFALO OFFICE, 72 Erie County Savings Bank Building.

ATLANTA OFFICE, Fourth National Bank Building.

EUROPEAN AGENTS,

Graphite Products, Ltd., 218-220 Queen's Road, Battersea, London.

USING WORDS OF DEFINITE MEANING

A Pacific Coast company were advertising a product called "Carnation Sterilized Evaporated Cream." When the pure food law went into effect the label was changed to read "milk" instead of "cream." *Printers' Ink* in commenting on this case, asks how many advertisers are using related terms like "milk" and "cream" with equal carelessness. It is dangerous to misuse words which have a definite scientific meaning.

When the law of the United States goes beyond food products and comes to have force on all other products, there will in all probability be a quick disappearance of some paints, advertised as graphite paints that contain no graphite, and Dixon's label "Silica-Graphite" will stand out bolder than

ever, for it speaks the truth only, Silica-Graphite and best quality of boiled linseed oil and no other ingredient. For nearly fifty years this paint has been advertised for just what it is. There has been no change in it, and it is recognized as the best protective coating for all metal work under many trying conditions.

FIXING OF RESALE PRICE

The Dixon Company has been asked time and again by jobbers and others to make a fixed resale price for its goods. At one time the Dixon Company were on the point of doing so, but were advised by counsel, who cited cases, that it would not be wise at that time to consider such a proposition. Late-ly the matter has been up again, but in view of the govern-ment suit against the Kellogg Toasted Corn Flake Company, the only thing that we can do is to wait the outcome.

The subject of price maintenance under the Sherman law, according to *Printers' Ink*, is one which puzzles the greatest legal minds of the day. "The harm that is done by half-baked opinions is not measured by the importance or unim-portance of the particular goods under discussion. Is it the purpose of the government to determine once for all whether the policy of price maintenance is in accord with the public welfare? It begins to look that way.

"In the last analysis the courts will decide this question in the light of public policy, and public policy, broadly speaking, is that which the people really want. Do they want the assurance that they can buy quality goods at a reasonable price and the same price here and everywhere, or do they want to go back to the old time deal and bargain sale system of barter? It is to be remembered that the Kellogg case is not a question of monopoly. Anyone who does not care to pay the stipulated price can buy corn flakes of some other company, and there is plenty to choose from There is bound to be a period of uncertainty of course, and it is quite possible that price maintenance will be knocked out for a time, but some likely means for effecting it will be found, we do not doubt."

A PURCHASER of Dixon's Electrotyping Graphite writes as follows:

"We have been having our share of grief out of some graphite which we recently bought from another party, and as we understand you put out the best graphite for electrotyping purposes, we want you to fill the enclosed order, shipping same to us via express, at once."

Though Dixon's Electrotyping Graphites are the standard in all up-to-date electrotyping plants for high quality, it is very pleasing to get this letter from our customer. While the Dixon Product is higher in first cost, the saving in buying cheaper and inferior products is entirely gone when one or two plates go bad.

"INK"

Visitor (to facetious farmer)—I'd like to know why on earth you call that white pig 'Ink'?

Facetious Farmer—Because he's always running from the pen!—*Town Topics*.



HOTEL OREGON, PORTLAND, OREGON

It cost just a million and a quarter of dollars to enlarge, remodel and furnish the Hotel Oregon after the plans and specifications of Doyle and Patterson, Architects.

The Hotel Oregon, be it known, is now considered the finest hotel west of the Mississippi. Its spacious lobby, grand staircase, sample rooms and beautiful grill, all contribute to make it one of the sights of Portland. The seating capacity in the dining rooms, banquet and grills is over 1200.

Special door locks with push buttons at the heads of beds so that doors may be opened by occupants of rooms without arising from bed, are among the innovations installed in the Hotel Oregon. Patrons will no longer have to grope about in

dark clothes closets for dress suits, for all closets are lighted with electricity from automatic door switches.

The Hotel Oregon addition is of steel and concrete construction and absolutely fireproof. It was erected by Smith, Rice & Company, Building Contractors, under contract with the Sound Construction Company. The one thousand additional tons of steel required were fabricated by Milliken Brothers, Inc., and painted both shop and field coats with Dixon's Silica-Graphite Paint, the best known protective paint for steel, whether inside or outside work.

Dixon's Paint is protecting the steel work of hotel buildings in other cities throughout the country. New York, Boston, Baltimore, Buffalo, Philadelphia, Pittsburg, Washington,

Richmond, Louisville, San Francisco and other cities are represented in our "Notable Building List." Write for a copy of this interesting guide to what others think of Dixon's Silica-Graphite Paint.



ATLANTA AD CLUB HONORS MR. LEWIS

Elects Southern Branch Manager of Dixon Company
Vice President and Committeeman

At the annual business meeting of the Atlanta Ad Men's Club, held in the dining room of the Kimball House in that city, the club's officers were elected for the ensuing year and delegates were named to the National Ad Men's convention, which is to be held at Baltimore in May.

J. H. Lewis, manager for the Southern Territory of the Joseph Dixon Crucible Company, was elected vice president of the club. The new officers are all well known in the business and commercial world of Atlanta. All have been active in the interest of the Ad Men's Club, and their election is considered as timely as it is wise. Their personal interests are for the welfare of the organization and for the good of Atlanta.

During the course of the dinner, plans were discussed for the trip to Baltimore in the spring. The newly elected vice president took an active part in this discussion and was further honored by being elected a member of the Ways, Means and Finance Committee and also the Transportation Committee.

The club selected a great many delegates to the Baltimore convention, among whom are a number of the best known advertising men in the South. Mr. Lewis will also be among the number who journey to the Maryland metropolis, and he may be depended upon to whoop things up for the Atlanta delegation. During the meeting of the club, stereopticon slides were used to illustrate a lecture on "Advertising Cooperation," and altogether the meeting was considered as one of the best ever held in the club's history.

ANHEUSER-BUSCH BREWING ASS'N

ST. LOUIS, Mo., Jan. 15, 1913.

Joseph Dixon Crucible Company,

Jersey City, N. J.

GENTLEMEN:—Having had daily practical experience in the operation of gas engines for six years, together with the

operation of Diesel Oil Engines for ten years past, I have resolved to state my experience and praise for Dixon's Graphite, for use on packings and in crank cases, especially where an emulsion of oil and water is maintained.

I have been able to operate Diesel Engines five months without the re-adjustment of any bearings, by placing five or six ounces of Dixon's Motor Graphite in the crank case two or three times weekly. It travels up the cylinder walls and adheres to the metal, thus reducing the wear of the cylinder, piston and rings, as well as of the bearings, to a minimum.

The best results with packings may be obtained by boiling them in a mixture of flake graphite and cylinder oil. Allow the packings to absorb all the graphite possible. After treatment the packing should not be used for three to four weeks.

Yours very truly,

J. J. WAGONER, Chief Engineer,
Diesel Power Plant,
Anheuser-Busch Brewing Ass'n.

HE LIKED THE PENCILS ANYWAY

Joseph Dixon Crucible Company,

Jersey City, N. J.

DEAR SIR:—In response to yours of an ultemate date, I acknowlage of recieving a parsel by post, since that time containing five lead Pensels, no more! for wch excep my flatery thanks my first choice for fine work is the Hixon H No. 4, 154 is that the finest and hardest grade made in your stock? next comes the Metor No. 811. have you that grade of lead or whatever it may be in other colors beside the purpel which we can get her at the merchants at any time, of some other manufacturers the next would be a Operators pencil No. 300, then the Anglo-Saxon No. 2 No. 1806 and the Dixon Sequola No. 2-1285 for general writing, wishing you success and kind remembrance with my thank in advance for the price list of this goods you make includeing the price of the Gem Eraser No. 1145 as per your blotting paper I suppose the color of ruber has nothing to do with the quality of work the eraser is to do. the one I have is white I seams to be geting roten from hard useage, and the black sponge eraser I have dont make a clean job at times, so please let me know by next U. S. mail how muck remittance in cash it takes to get a sample of the Gem Eraser and oblige

Yours very truly,

AS YOUNG AS YOU FEEL

A good painter is checkmated if he does not secure the best paint made. A slightly higher price for better paint is as nothing compared to the *longer service* given. A man is as young as he feels, and a paint is as new as it lasts. That is to say, Dixon's Silica-Graphite Paint may have been applied on the steel ten years ago and be as efficient as a paint applied this week.

In these days of high prices, why not use a paint that will save you the cost of frequent repainting? We have made Dixon's Silica-Graphite Paint for nearly fifty years in *one quality* only, *the best*. Write our Paint Department for literature.



GRAIN ELEVATOR MEN, ATTENTION!

The above structure of the Burlington Elevator Company, St. Louis, Mo., was painted with Dixon's Silica-Graphite Paint in 1902. It was next repainted in 1909 with Dixon's Paint, a record of seven years under the trying conditions of weather, smoke, etc., which elevators are subject to along the water front.

We have many similar records where our paint has given a service of from seven to ten years without repainting. Dixon's Silica-Graphite Paint is therefore a *longer service*, economy paint, as it saves in labor and material. There is no paint which in any way approaches these satisfying qualities of Dixon's Paint.

Why not get in line with other efficiency people and write our Paint Department, asking how we can save you money and give you paint satisfaction in every way?

Dixon's Silica-Graphite Paint is especially suited for grain elevators, smokestacks, boiler fronts and all inside and outside metal surfaces.

REVENGE

Those who have endured the tonsorial artists' roll-call will appreciate the following experience of a man who went into a certain post office and asked for ten cents' worth of two-cent stamps.

"There you are, sir" said the clerk on handing out the stamps. "How about sending something by parcel post this afternoon?"

"I haven't anything that I care to send," replied the man with a surprised look.

"Maybe you would like to have a money order?" returned the clerk. "I can fix it up for you in about two seconds."

"No," replied the man, picking up his stamps, "I haven't any use for one."

"Maybe you would like a few postal cards?" persisted the clerk. "We have just got in some fresh ones from Washington."

"No, I don't want any," answered the man, looking at the clerk rather suspiciously.

"How about some stamped envelopes?" suggested the clerk. "Saves the time wasted in licking on the regular stamps."

"No, I don't want any stamped envelopes!" declared the man a trifle perversely.

"I see," was the affable response of the clerk. "Perhaps you would like to rent a postoffice box, or register a letter?"

"I would not!" exclaimed the man. "I have got all that I want in the postoffice line!"

With this he haughtily left the building, while the clerk braced himself behind the window and chuckled gleefully.

"Who was that man," curiously asked a party who had overheard the conversation, "what was it all about?"

"He is a blooming barber," merrily answered the delighted clerk. "Didn't I get square with him all right?"

The gold that with the sunlight lies
In bursting heaps at dawn,
The silver spilling from the skies
At night to walk upon,
The diamonds gleaming in the dew
He never saw, he never knew.

He got some gold dug from the mud,
Some silver crushed from stones;
But the gold was red with dead men's blood,
The silver black with groans;
And when he died he moaned aloud:
"They'll make no pocket in my shroud."

—JOAQUIN MILLER ON THE MILLIONAIRE.



**STANDPIPES, MERCHANTVILLE WATER COMPANY,
MERCHANTVILLE, N. J.**

The care of water tanks and standpipes is an important matter and much study has been given the problem.

Many hundreds of water tanks and standpipes are protected with Dixon's Silica-Graphite Paint and engineers and constructors who have at heart only the best interests of the many companies whom they serve, have recommended the use of Dixon's Paint.

The particular view illustrated on this page is of the standpipes of the Merchantville Water Company of Merchantville, N. J. Mr. W. H. Boardman, Engineer, of No. 426 Walnut Street, Philadelphia, is the designer, and the standpipes were painted with Dixon's Silica-Graphite Paint by Mr. M. B. Main,

Contracting Painter, Camden, N. J., under Mr. Boardman's specifications. Experience has taught this expert engineer that it is more economical to use Dixon's Silica-Graphite Paint than to run the risk of early deterioration and consequent greater expense. Wherever it is used, Dixon's Paint demonstrates its superior lasting qualities.

Please correspond with us as to metal surfaces that you may have to protect, and we will show you how to make economies in labor and material by using our longer service, one quality paint.

I HAVE BEEN reading GRAPHITE furnished me by Mr. H. C. Ettinger, Springfield, Ill., and like the paper so well that I now send in my name for it.

Yours respectfully,
MR. MARTIN ETTINGER.



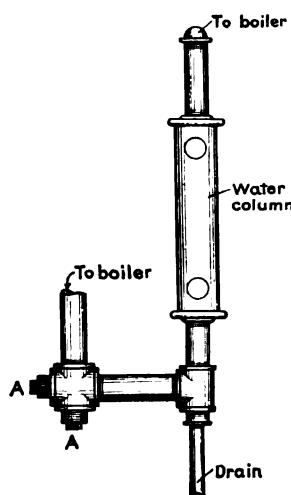
The accompanying illustration gives a good idea of the new four track bridge of the New York, New Haven & Hartford R. R., Worcester, Mass.

This bridge was carefully designed by competent engineers and shows the progress being made in railway engineering. It is interesting to observe that the bridge is so constructed that tracks will be laid over it for the trains of the New York Central Lines. For this reason the bridge is built exceptionally strong.

The structure is well painted with Dixon's Silica-Graphite Paint, which not only gives a good protection against corrosion, but presents an attractive appearance.

ABOUT PIPE AND VALVE CONNECTIONS

By H. A. JAHNKE*



The majority of water columns on steam boilers are connected in a way similar to the illustration reproduced on this page. In cleaning boilers the plugs *A* and *A* should be removed. A rod should then be run through the lower pipe connection to remove any scale which might be lodged there. It is often difficult to remove these plugs, especially those located in the smoke box in front of the boiler. I have found it to be good practice to cover the threads on these plugs with a coating of Dixon's Flake Graphite

mixed with cylinder oil.* * The plugs will then come out much easier and upon all future occasion may be taken out without disfiguring them in any way.

When it is necessary to renew the water gauge glass on a steam boiler, in most cases it will be found that the old pack-

ing ring has to be dug out of the packing nut. I have found, if the threads of the packing nut are covered with graphite mixed with oil before placing the packing ring, there will be no trouble to remove the old packing ring the next time a new gauge glass is necessary. At times the old packing ring can be used over again.

* Mr. Jahnke, in his engineering practice, has been a user of Dixon's Flake Graphite for about eighteen years. He has been a reader of GRAPHITE for the past five years.

** Dixon's Pipe Joint Compound is a mixture especially prepared and recommended for threaded and flanged connections of all kinds. It not only saves time and bother in making a mixture of graphite and oil, but due to its correctly proportioned ingredients, it will be found superior in many ways to a home made compound.

IN SIGNIFICANT EXISTENCE

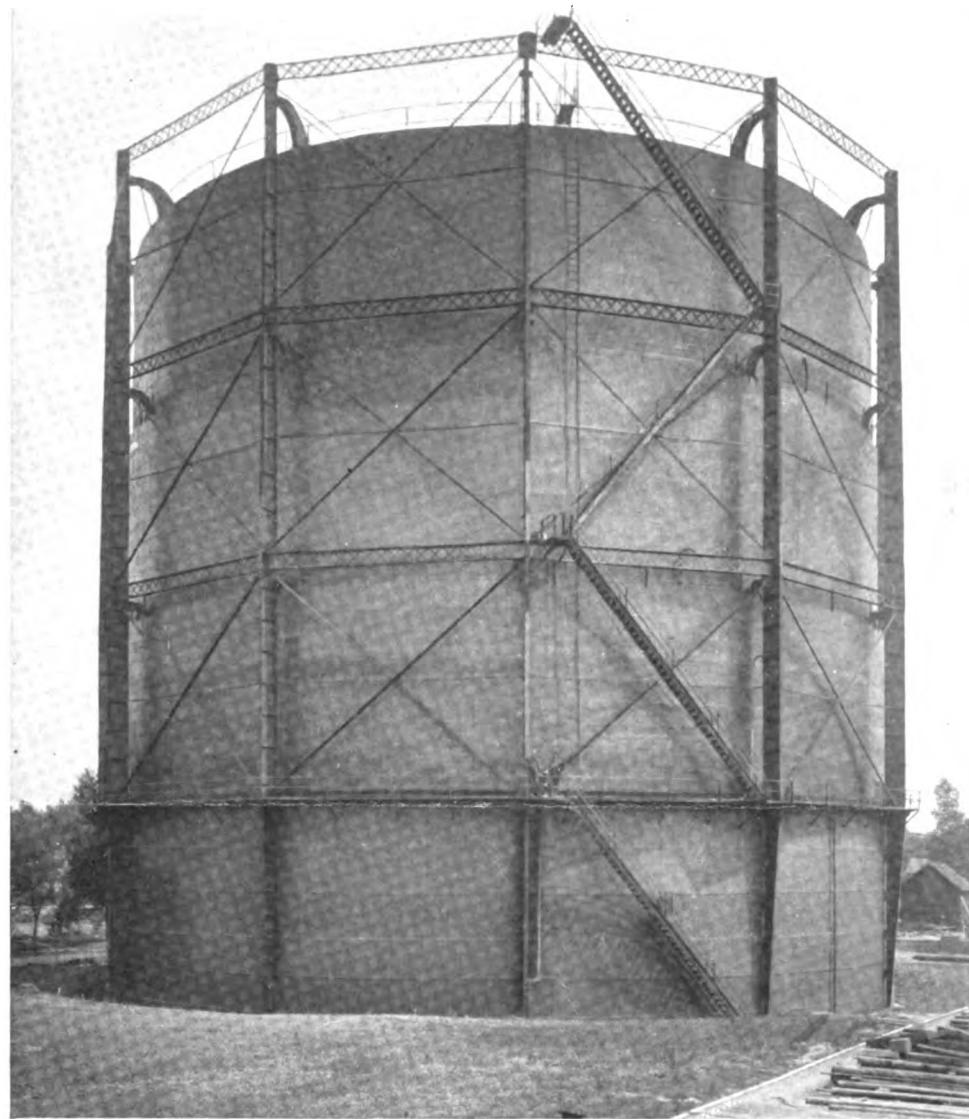
There are a number of us creep
Into this world to eat and sleep,
And know no reason why we're born,
But only to consume the corn,
Devour the cattle, fowl and fish,
And leave behind an empty dish;
The crows and ravens do the same,
Unlucky birds of hateful name.
Ravens or crows might fill their places
And swallow corn and carcasses.
Then if their tombstones, when they die,
Ben't taught to flatter and to lie,
There's nothing better will be said,
Than that "They've eat up all their bread,
Drank up their drink and gone to bed."

—ISAAC WATTS.

GET A DIXON'S ENDURANCE

Professor—You say you are engaged in some original research. Upon what subject?

Sophomore—I'm trying to discover why the ink won't flow from my fountain pen unless I place it in an upright position in the pocket of a light fancy vest.—*Chicago News*.



**GAS HOLDERS, LIMA GAS LIGHT COMPANY,
LIMA, OHIO**

Painting of gas holders is a problem that gas companies are called upon to face one time or another. Some, indeed, face this problem too often, and thereby hangs a tale of satisfaction or regret, depending on knowledge and experience.

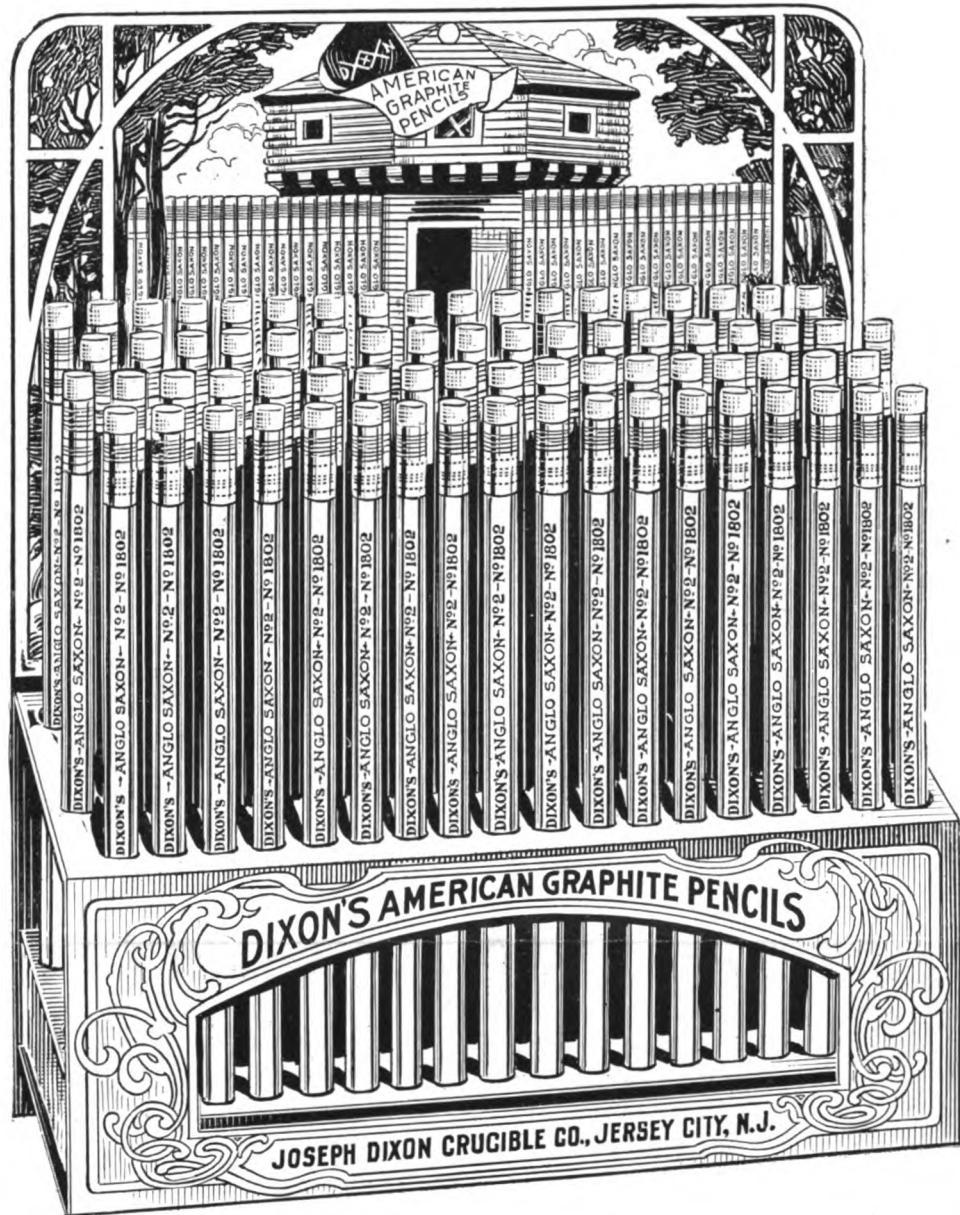
A wise purchasing agent does not decide by the mere first cost, but by the known length of service. Hundreds of the largest gas holders throughout the country are painted with Dixon's Silica-Graphite Paint and gas company officers and engineers have acknowledged the excellent, longer service that Dixon's Paint renders, thus making a saving in labor and material.

One of the newest holders to don this protective coating of silica, graphite and pure, boiled linseed oil, provides illumination for a goodly portion of the 30,000 and more citizens of Lima, Ohio. This holder, a view of which appears on this page, has a capacity of 1,000,000 cubic feet and is the property of the Lima Gas Light Company.

If you are interested in gas holder protection, write to our Paint Department for a copy of a most interesting and artistic illustrated booklet on the subject.

THERE are noises on a motor car that call for prompt attention, like a knock in the motor, and then there are noises that do not call for prompt attention, like the squeak of a spring or the rattle of a mud guard. There is no warning noise, however, in the matter of lubrication. At least, not enough to mention. The damage is often done without warning unless Dixon's Flake Graphite is used to safeguard the bearing surface itself. Where thin flake graphite is used a veneer-like coating is formed on the bearing surfaces which possesses a wonderful degree of smoothness and endurance. It prevents seizure of parts, but there will be drag enough to indicate need of attention.

DIXON'S graphite publications sent free upon request.



THE accompanying illustration is of the new No. 1245 Display Selling Case, which is now being placed upon the market by the Dixon Company. The case itself is substantially made of metal and highly decorated in colors. Its durability and attractiveness have already led many stationers to welcome it to their show cases and shelves as a valuable and profitable selling aid to other lines.

The case is stocked with one half gross of the popular Dixon's Anglo-Saxon Pencils No. 1802, green finish, No. 2 grade and hexagon shape. Other finishes of the Anglo-Saxon Pencil are substituted as desired and one half gross of No. 1806, purple finish, or one half gross No. 1822 yellow, or two dozen each of the Anglo-Saxons in green, yellow and purple may be ordered. Stationers are finding an ever increasing demand for this popular Dixon pencil, and in its new form anticipate a still further number of sales.

"STRICTLY"

The dictionary tells us that the word "strictly" means "with no exceptions." There are eggs, fresh eggs and "strict-

ly" fresh eggs, but all of them are eggs and yet there is a difference. The various graphites advertised for lubricating purposes may be classed much the same way, but to the engineer and to the master mechanic, who knows from experience, there is a difference, and Dixon's Ticonderoga Flake Graphite is "strictly—with no exceptions" the only graphite for best results.

EXCITING THE SIGHTLESS

One of the cleverest of Cleveland's blind newspaper merchants takes his stand daily at one of the corners of the public square. He's got a sarcastic little sign that reads:

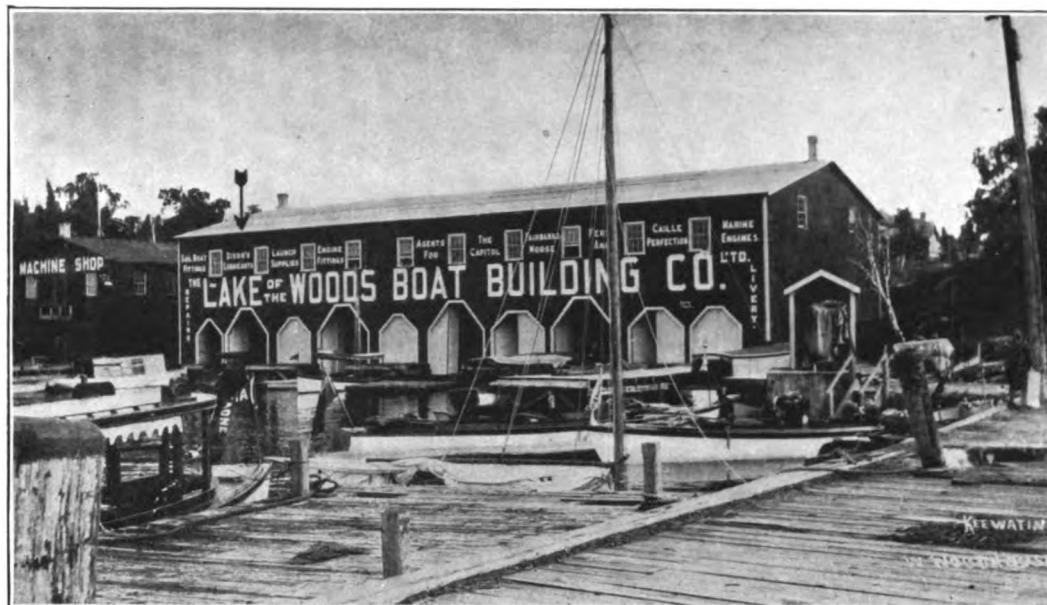
"Don't be ashamed to give me a penny—I'm blind."

The other day a friend of ours dropped a nickel in front of this chap, just to see if he was faking. The blind man never shifted his blank face, but he said:

"Make it a quarter, boss, and I'm likely to forget myself."

—Cleveland Plain Dealer.

DIXON's graphite publications are sent free upon request.



LAKE OF THE WOODS BOAT BUILDING COMPANY

Each summer hundreds of campers, many of whom come from Uncle Sam's domain journey to the "Lake of the Woods," Canada's charming summer resort. The "Lake of the Woods" is just far enough from Winnipeg to prevent the *entire* population of that thriving city from deserting their daily tasks to enjoy the alluring temptations that hold so many visitors long after the season is past.

During the season the lake is dotted with motor boats and other pleasure seeking crafts. Some idea of the number of these may be gathered by spending a day at the Lake of the Woods Boat Building Company, a photograph of which is reproduced above. Repairs and supplies are a constant source of revenue to the Lake of the Woods Boat Building Company, and though it would not be troublesome for boat owners to procure supplies elsewhere, they have never found incentive because of the efficient work and complete stock at their service.

Some of our observant readers who have looked at the illustration above, will have discovered the arrow which, pointing downwards from the roof of the boat house at one end, indicates that among the supplies which find favor at the "Lake of the Woods" are Dixon's Graphite Lubricants. An ever increasing demand is anticipated for these particular lubricants, for good news travels fast upon the "Lake of the Woods."

**COMMANDER PALMER'S CAR IN GOOD
CONDITION AFTER SIX YEARS OF SERVICE**

Many of our readers will recall the interesting letters published in GRAPHITE some years ago from Mr. J. E. Palmer, Commander of the U. S. Navy, relative to the use which he had made of Dixon's Graphite in marine work. We have received another letter from Commander Palmer, and it is with a great deal of pleasure that we reproduce the following from him:

I feel much flattered to know that you remembered me and the correspondence we had a few years ago, while I was on duty in Pittsburgh. Since that time I have been in Europe

and the Orient and have just recently returned to this country. I have used graphite continuously on my motor car—with the exception of a year and a half while I was in the Orient, during which time it was stored in Liverpool. I recently had my car overhauled by the Franklin Company in Syracuse, N. Y., and remodeled.

The company stated they had never overhauled a car in such good condition after six years of service. They did not even have to regrind the cylinders, they were in such perfect condition. Not a single bearing was badly worn. Only the forward crank shaft bearing was renewed and this was not really necessary, but it was thought best to do it as long as the engine was being overhauled.

I used your graphite in all of my bearings, always kept a little graphite in my oil squirt can and used about a small teaspoonful in my crank case every 1,000 miles.

I attribute the excellent condition of my car to the use of graphite, and consider that after such a long service in this country and over the most of Europe, that my car is a splendid recommendation for the use of Dixon's Graphite.

If I can be of any service to you I hope you will call on me.

A LITTLE SENTIMENT

As we grow older and the shadows begin to lengthen, and the leaves, which seem so thick in youth above our heads, grow thin and show the sky beyond, as those in the ranks in front drop away and we come in sight, as we all must, of the eternal rifle pits beyond, a man begins to feel that among the really precious things of life, more lasting and more substantial than many of the objects of ambition here, is the love of those he loves, and the friendship of those whose friendship he prizes.

—HENRY CABOT LODGE.

DIXON's graphite publications sent free upon request.

A FEW EXPERIENCES WITH FLAKE GRAPHITE

By D. L. FAGNAN*

To relate the writer's personal experience in its entirety during twenty years of engineering experience, which varied from the small plant to some of pretty good size (reciprocating only), would take up much more space than would be allowed and besides would be practically a repetition of the same articles that have been published from time to time and would therefore have no effect on the engineer who is looking for convincing proof that graphite, "as the successful power plant man knows," will lighten his labor and always give magnificent service.

The more successful the operating engineer is, that is, the higher up he goes in his profession, the more uses he finds for flake graphite in its various forms and the more it is used by him.

The writer has been in the engine room both at sea and on the lakes, has been fireman and runner on locomotives in freight service, has made a few runs on passenger routes and has had some fourteen years' experience as operating and erecting engineer in important plants, handling oil and gas engines, refrigerating machinery, ice making plants, air compressors, steam engines, all kinds of auxiliaries, irrigation pumping in western section of the country, oil well pumping, producers, and in active charge of heavy rolling mill service and blowing engine work. In each and every plant I have found so many uses for Dixon's Flake Graphite or Pulverized Flake Graphite, as the case might be, that it would be impossible to enumerate all.

I have even fed Scotch type of boilers with graphite and was entirely successful in keeping down excessive scale formation, which was characteristic of that section of the country. I have kept boilers in irrigation work for 125 days without a stop. While other engineers would experience bagged sheets, the writer carried his boilers through by the judicious use of the blow-off and graphite. I would find the tubes and corrugated sheet in excellent condition, sheets just slightly coated with scale. Graphite is the engineer's best ally.

The writer noticed an air receiver explosion in Cleveland, O., at one time where upon examination the piping and air receiver had simply opened up flat. An examination of the interior of the lower head (vertical receiver) showed about two inches of solid carbon, porous and very black, which made a layer on the bottom. This was due to the use of an oil of too low flash test. The resulting temperature of the discharge air at 100 pounds pressure had been sufficient to form a rich mixture, which ignited by the heat and caused the explosion. The same thing can and does happen at times in testing out old piping systems, using the ammonia compressor to get up the air pressure. This is a dangerous practice. If you must use the compressor, then run it slowly and stop before the heat developed on compression is too high—allow the air to cool and start up again, doing this intermittently and in this way the heat is kept down to a reasonable temperature. In the meantime it is best policy to feed Dixon's Fine Flake Graphite (which has been mixed in soap suds) to the air intake of the compressor. The water will help keep down the heat and the graphite will be diffused through the piston and valves, the stuffing box, etc. Serious explosions are avoided by being careful in pumping up air pressures with old equipment, which is generally saturated with low flash test oils.

If there is any place worse for an operating or chief engineer to work in and where moments count more than in rolling mill and blast furnace work, the writer has not seen it and doubts greatly the possibility of any such place. To have an engine down in such a plant means disgrace and loss of prestige with the management. All the supplies are given that are called for, so that the blame rests entirely upon the engineer in charge. Good salaries are paid and a man must know engines and boilers well. Troubles come very frequently. Cylinder and valve troubles are easily remedied, for it is simply a case of applying the indicator and analyzing the tale it tells. But bearing troubles—you mustn't have any—or if they develop, get the graphite can out quickly and nurse them back to life. "Shut-downs"—well, ask the man who is operating such engines. They shut down only when the work is done or the engine can be spared. Twenty-four hour service 365 days a year would be impossible without well fitted and well kept engines, and last but not least, flake graphite.

The writer wonders why the railroad engineers are not furnished all the graphite they need. The railroads would save thousands of dollars yearly above all costs for graphite purchased. In the writer's experience in freight service, he distinctly remembers the way the engine used to pull the sixty empty or forty loaded cars up a grade; in ordinary cases the engine would have a good start down one grade before going up the other and would ordinarily just make the last 100 feet or so at a snail's pace. In other cases for comparison, with the same steam pressure and same number of cars while going down the short grade, we would shut off the steam and allow some graphite (about a teaspoonful) to be snuffed into the cylinder through the relief valve. The engine would then be enabled to go much faster when reaching the top of the grade, which showed distinctly the value of graphite in locomotive work.

Engines wear very fast and the amount of oil fed to locomotive cylinders and bearings is entirely inadequate. It's a case of saving oil and wearing out the engines, which is a very short sighted policy. The writer has bought, begged and stolen lubricating oil for his engine, because the oil allowed per trip is often not enough.

A little graphite should be applied to nuts, bolts, on boilers; in fact, "graphite everywhere in the power plant" is the writer's motto. You can of course use too much, but use it judiciously and note the fine results you will get.

I hope that this article is not too long, but my enthusiasm for graphite has carried me along from one thought to another at greater length than I intended. I hope the young fellows who are coming up in the engineering profession will follow the writer's advice and keep Dixon's Flake Graphite on hand for the emergencies which are sure to come.

*Mr. D. L. Fagnan was for a number of years in active charge of Swift & Company's Cold Storage Warehouse in Cleveland, Ohio. Later he became erecting engineer of Ice Making, Refrigerating, Oil and Gas Engine Departments of The De La Vergne Machine Company, New York City, and was placed in charge of oil and gas engine sales for States of Ohio, Kentucky, Tennessee and Indiana.

He was recently transferred to a better field, viz., State of Texas with offices at 1016 Carter Building, Houston, Texas. Mr. Fagnan carried the best wishes of a host of friends to his new position and no doubt the experience gained during twenty years in charge of mechanical equipment, will be of much value to him. Especially interesting has been his experience with Dixon's Flake Graphite. Mr. Fagnan's enthusiasm as expressed in his contribution above is born of an intimate knowledge. Few persons have so thoroughly tested the efficacy of Dixon's Flake Graphite in such varied uses and it is indeed pleasant to know that it has never failed to give satisfaction to him.

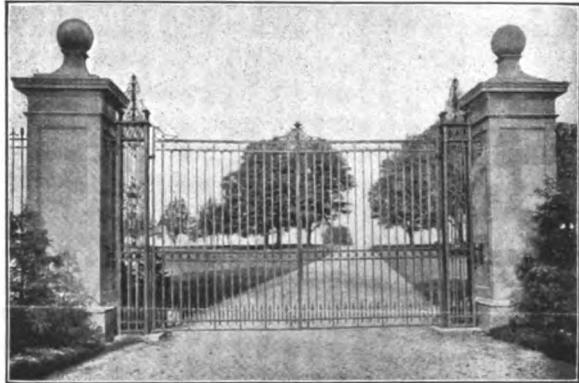
ABOUT DIXON'S BOILER GRAPHITE

NEW YORK CITY, Oct. 8, 1912.

*Joseph Dixon Crucible Company,**Jersey City, N. J.*

GENTLEMEN:—Relying to your inquiry as to the efficacy of Dixon's Boiler Graphite (fine flake), permit me to say that I have used it for the past two months in our three 125 horsepower horizontal tubular boilers with very satisfactory results. Our boilers had accumulated a very heavy deposit of scale, which was entirely removed by the use of your graphite. We have been using this at the rate of one pint every other day in each boiler. I might also add that we have used it in our feed water heater with the same results.

Yours very truly,

Chatsworth Apartments,
72nd Street and Riverside Drive,
New York City.A. C. MEGILL,
Chief Engineer.

Above is a reproduction of the ornamental entrance gate to the Estate of Henry Steers, Port Chester, N. Y. The gate and fence were manufactured by the well known firm of F. E. Carpenter Company and are protected from corrosion with Dixon's Silica-Graphite Paint, the most economical and longest lasting protector of steel and iron work.

MORE ABOUT DIXON'S BOILER GRAPHITE

L. M. HAM & COMPANY

152-158 PORTLAND STREET

BOSTON, MASS., Feb. 15, 1913.

*Joseph Dixon Crucible Company,**Jersey City, N. J.*

GENTLEMEN:—I have used Dixon's Boiler Graphite No. 2 as a preventative of scale accumulation in my Cunningham horizontal tubular boilers with wonderful results.

When the boilers were new I fed a quantity of graphite into the water and every now and then added a small quantity in the feed water. Upon opening the boilers I found a thin coating of graphite adhered to the metal surfaces throughout. It seemed impossible for scale to gather on this exceedingly smooth surface.

My boilers are in the best of condition at the present time and probably will remain so as long as I continue the use of your graphite. Very truly yours,

WM. F. MCGEORGE, Chief Eng.



"Some folks," remarked Old Jerry, as he waved aside the salesman's proffered cigar, "just take naturally to usin' any kind of tobacco."

"Like one of the boys I once knew who tried to get along without the little red tin of DIXON'S FLAKE GRAPHITE. He didn't seem to think that 'flake' meant any particular kind of graphite and 'DIXON'S' any particular kind of flake."

"I never saw such a disgusted one as Pete was," chuckled Old Jerry, "after his graphite had balled up once or twice in his cylinders and if it wasn't because the rest of us was usin' FLAKE GRAPHITE he would have sworn up and down right there that graphite was the most durned fool stuff to use as a lubricant."

"Pete," I says, pullin' out my old Dixon ad and grinnin' at the boys, "It says here: 'Write for "Graphite Products for the Railroad" and Sample No. 190—R. R.'"

"You're right, Jerry, he says."

Joseph Dixon Crucible Co.

Established 1827

JERSEY CITY, N. J.

GRAPHITE



VOL. XV.

MAY, 1913.

No. 5.

Issued in the interest of Dixon's Graphite Productions, and for the purpose of establishing a better understanding in regard to the different forms of Graphite and their respective uses.

A LESSON FROM THE "BLUE PAINT STORE"

McClure's Magazine recently reprinted in booklet form the remarkable story of the "Blue Paint Store" by Edward Mott Woolley.

This story, which tells of the successful establishment of a retail paint business, after sixty years of existence in a hopelessly old fashioned way, has attracted wide attention from business men, paint manufacturers, jobbers, dealers and consumers.

In a most original way Henderson launched his business, but scarcely had the new order of things taken seed when he "began to get complaints about the goods he was selling. These were the same goods the little old store had sold, but complaints had never disturbed it. With

the Blue Store—which had the eyes of the whole city upon it—the case was different.

"At first thought, it would seem an easy thing to procure high class goods to sell, or to get goods that meet some popular requirement not necessarily dependent on price. In reality, this is one of the most troublesome of business problems; it is commonly neglected because it presents so many vexations. To live up to a definite standard requires a dead-line, with sentries posted all along it. In one business out of a hundred you find such a dead-line. The ninety-nine others are more or less like the paint store before young Henderson bought it.

"Henderson was a dealer, not a contractor. The contractors and smaller consumers, who used his goods, looked to him for protection; nevertheless he was unable to assure them that his paint wouldn't pull off within a month or rise up in blisters when the sun struck it. There are plenty of merchants today who can't tell why the goods they sell don't have fast colors, or what gives their coffee an off taste.

"But Henderson's magic consisted in finding out. He set about a study of paint ingredients, and presently he discovered that the United States government had already taken a scientific interest in the subject. It had issued a pamphlet giving the chemical analyses of most of the brands of paint on the market, together with other technical information of great value. Henderson's goods now lay revealed before him in a most surprising manner. He found that some of his mixed paints contained no linseed oil whatever, but a substitute of

cheap vegetable oil. A benzine drier took the place of turpentine, and plain water made up a considerable percentage."

Here is food for thought that many paint and hardware merchants should digest carefully. In the field of protective paints there are plenty of opportunities for those who determine, as Henderson did, that they will represent only manufacturers who make unquestionably reliable products.

MORAL: "One quality only—four colors—for fifty years."

IGNORANCE OF THE BIBLE

The Boston Herald, in commenting on the growing ignorance of the people in regard to the Bible, says:

"Viewed distinctly as great literature the Bible stands pre-eminently among the masterful expressions of the world's religious genius. What Greek tragedy compares with the drama of Job, not only in the splendor of its diction, but in the spiritual exaltedness with which it touches the mysterious problems of human destiny? Where has human eloquence surpassed Isaiah, or human worship found richer expression than in the Psalms? Even its legendary folklore, which it honored from the civilizations older than itself, it has touched with the grace of a spiritual elevation utterly absent from the originals.

"Unfortunately, this age has almost forgotten the vital relationship which the Bible sustains to our modern civilization. Its inspiration is woven into the web and woof of our ethical ideals. The shallow anarchism which inscribes upon its banners, 'No God, no master,' forgets, if it ever knew, that the only democracy for which heroes have fought and martyrs and saints have died has its deep roots in the conviction that men are the Almighty's sacred children."

We are further told that when Mr. Roosevelt bestowed upon his famous club the name of that celebrated historic character Ananias, many intelligent and well educated people rushed to a biblical concordance to see what saint in the calendar had been distinguished by the ex-president.

We find in Shakespeare nearly six hundred quotations from and allusions to the Hebrew scriptures—quotations and allusions very familiar to people in those days. Nothing can be more remarkable than the astonishing change in the modern man in relation to the scriptures. They are a dead language to many a group of college graduates.

"BY ADVERTISING a man can dispose of a mountain of sawdust at one dollar per ounce, troy weight. Without advertising he can offer frank incense and myrrh to all comers free of charge until the stuff spoils on his hands."

ESTABLISHED 1827



INCORPORATED 1868



JOSEPH DIXON CRUCIBLE CO.

JERSEY CITY, N. J., U. S. A.

**Miners, Importers and Manufacturers of Graphite,
Plumbago, Black Lead.**

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EUROPEAN AGENTS,

Graphite Products, Ltd., 218-220 Queen's Road, Battersea, London.

GASOLINE

Gasoline, George Fitch tells us, was originally used only for cleaning gloves and ejecting hired girls through the kitchen roof, but has now been taught a great variety of interesting tricks, such as running automobiles, aeroplanes, motor boats, windmills, street cars, hearses, corn shellers and bicycles.

By the aid of gasoline we can travel sixty miles an hour through the air, 150 miles an hour over the land and six feet into the ground with the greatest ease.

A gallon of gasoline can do as much work in an hour as a horse can do in a day, and it doesn't have to be fed and bedded down at night. It can drive an automobile twenty miles, and while doing this can cause three runaways, a collision, a \$20.00 fine for speeding, a divorce suit and an inquest.

A gallon of whisky at a Saturday night dance can cause a great deal of trouble, but it is tame and kittenish beside a gallon of whiz-water which is conducting a joy ride.

Gasoline is a clear, nervous liquid which is composed of speed, noise and trouble in equal parts. It is made of kerosene reduced to a more violent stage and is kindly supplied to the restless portion of mankind by the fragments of the late Standard Oil Company.

UMBRELLAS

It may ease the conscience of the man (if it needs easing) who took my umbrella, even though it does not help me if he should happen to read the following:

"The other afternoon I left the Carteret Club in company with a friend. It was raining hard and as my companion was umbrella-less he picked out a good one from the stand in the hall as we left.

"You will send it back," I ventured to say, "when you reach your office?"

"Oh, I don't know," was his reply. "If I don't leave it there, I shall in a trolley car or at the theatre. You may be sure I shall not keep it."

"But what of the owner?" I persisted.

"The owner? Oh, you mean the man who left it at the club. My poor fellow, you do not understand. If this were a well-regulated community you would not prate to me about 'owners' in such a connection. This wretched rain is not a localized but a general nuisance, and I, in common with others who have gone seriously into the matter, consider that it ought to be regarded as a state concern and obligation to protect us from it. Look at the anomalies which result from the supply of umbrellas being in private hands. You, I daresay, have three of these articles; I possess none at all. For what do we pay taxes?"

"Every three years," he added, "I give \$2.00 or so for an umbrella of good serviceable alpaca. Invariably I leave it about somewhere and it disappears. It becomes part and parcel of the great communal stock of umbrellas. Having made my contribution to that stock, I am surely entitled to draw from it upon an emergency such as that of this afternoon."

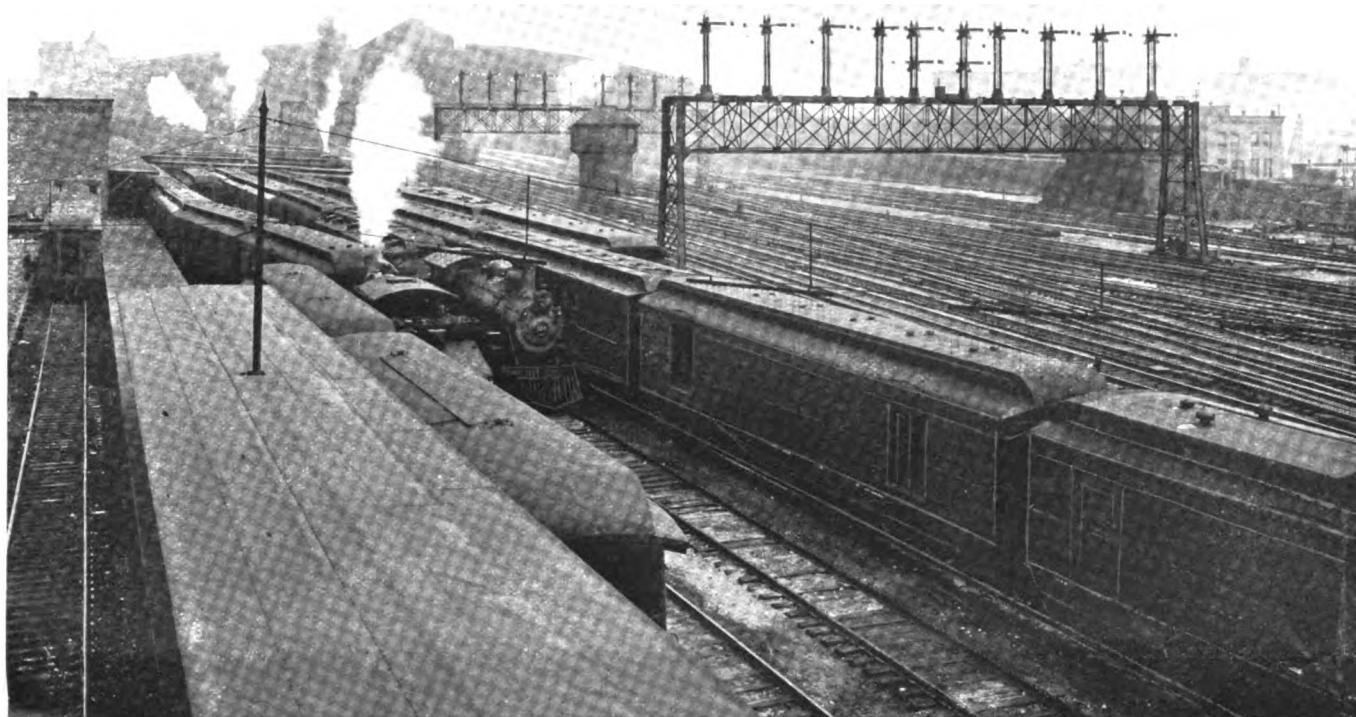
"SOME DAY"

The *Philadelphia Ledger* tells us that "some day" is the one day of the 365 that we could not do without. Of course it has no place in the calendar—nevertheless it is the most popular day for making disagreeable engagements. It is the day that we are going to do something that we ought to have done today, or yesterday, and certainly not later than tomorrow.

Today is always too crowded, or too hot or too cold, or too wet or too dry for us to do it, but "some day" we will do it.

"Some day" is that glorious day in the far golden haze of the future that seems to have in it the infinite leisure of eternity.

"ADVERTISING is the voice of business, but it should not be allowed to rise to a hoarse shriek and disturb the landscape."



SOUTH TERMINAL STATION YARD, BOSTON

Even the casual glance of a visitor around the great South Terminal Station Yard at Boston, Mass., with its confusing number of tracks and switches must impress that visitor with the work and responsibility of the man in the tower, the signal engineer.

Much depends upon the maintenance of the pipes, bridges and other apparatus under charge of the signal engineer. He cannot and as a rule does not take any chances with protective paint and for that reason Dixon's Silica-Graphite Paint is recognized as the standard by the leading railroads of the country.

Dixon's Silica-Graphite Paint is and has been giving excellent service for many years upon the signal bridges in the Boston Terminal Yard. The photograph reproduced above does not picture all of the signal bridges in this famous yard.

HOME MOST DANGEROUS PLACE

The Travelers' Insurance Company of Hartford has compiled a table showing the causes of accidents on which claims were paid by the company last year. It is curious to note the high percentage of accidents that happen to people while at home and walking. It would appear from the paragraph shown that it is twenty-five times more dangerous to stay at home than it is to take a steamship journey, and twice as dangerous to stay at home as it is to take an automobile ride, although possibly this does not include joy rides.

ONE FOR THE ROOSTER

A writer in the *New York Sun* takes exception somewhat to the vast amount of praise that is being given the hen. He acknowledges, of course, that the body when it is not too old and tough makes good food, and a nice broiled chicken is something that will stop any one from running amuck; and hens' eggs are very largely, if not quite indispensable. At the same time he does not want us to forget the rooster. He says:

"There is not the least credit given to the rooster, the most gallant and generous of all birds or animals. He loves 'not wisely, but too well.' Given a piece of nice sweet ginger bread, do you think that he will eat it? Never! He will cackle and crow for the hens to come, will stand by with an air of perfect contentment and watch them eat it, even though hungry himself, never touching a particle until they have had enough."

IN THE March issue of GRAPHITE we made use of a poem which appeared in the *Business Journal* of October, 1912, marked "Selected." As is customary, we simply credited the poem to "Selected." We now learn that this poem is the property of the American School of Correspondence, and was copyrighted by them, and to them the credit should be given.

DIXON'S graphite publications sent free upon request.



Bob Evans, "The Light Car Speed King," Winner at Tacoma, Galveston and Jacksonville Races. On the Indianapolis Speedway, Evans Broke the Records up to Twenty Miles for the Piston Displacement Class of His Car

Bob Evans has been particularly active as a driver of light cars in track and road races and has a number of victories in the former division to his credit. Early in 1911 he piloted a Warren-Detroit with marked success and on November 13 of the same year, at the wheel of a Flanders he established speedway records for from five to twenty miles for class "C" cars of 160 cubic inches piston displacement and under. These records remain unbeaten. At Savannah in 1911 Evans won second place in the road race for the Tiedeman Trophy in an E-M-F Car.

Evans holds a premier position among drivers of light racing cars. All of his really notable performances have been made in light cars. Last year he drove his Flanders Special into second place in its class at Santa Monica and a little later won the light car race at Tacoma, after a remarkable exhibition of driving skill. Evans won the light car event at the Galveston Beach Races in August and also won a twenty-five mile race at Jacksonville, Fla. He is acknowledged by many to be the "Light Car Speed King."

Like other speed kings Evans finally approached the subject of lubrication with the realization of its vital relation to his success as a racing driver. He could afford to use nothing but the best and that he found in Dixon's Graphite Automobile Lubricants.

The following expression of opinion from this noted driver will interest all motor enthusiasts and serve as another indication of the merits of Dixon's Graphite Automobile Lubricants.

NEW YORK, Oct. 17, 1912.

Joseph Dixon Crucible Company,

Jersey City, N. J.

GENTLEMEN:—It may interest you to know that during the past two seasons I have used Dixon's Graphite Greases in my Studebaker Racing Cars, and that their use has undoubtedly helped me to cross the tape a winner in many important events.

I have used every kind of grease made and find that Dixon's Graphite Grease is positively the best for reducing friction to a minimum.

I could never be induced to use any other but Dixon's Graphite Greases in my cars.

Very truly yours,

(Signed) BOB EVANS.

A MAN passes for what he is worth. What he is, engraves itself on his face, on his form, on his fortunes, in letters of light. Concealment avails him nothing, boasting nothing. There is confession in the glances of our eyes, in our smiles, in salutations and the grasp of hands. His sin bedaubes him, mars all his good impressions. Men know not why they do not trust him, but they do not trust him. His vice glasses his eye, cuts lines of mean expression in his cheek, pinches the nose, sets the mark of the beast on the back of his head, and writes: Oh, fool! fool! on the forehead of a king.—EMERSON.

WHERE FEW EMPLOYEES DIE AND NONE EVER RESIGN

If we go abroad we are surprised to find that the men of other nations know a great deal more about the United States than we men of the United States know about other countries.

We also find that some of the things which we have inaugurated and for which we pat ourselves on the back, are not new to other countries—in fact, that they have been developed in other countries better than in our own.

There is an old Monastery in Germany devoted now to the making of steins. Probably very few American travelers who have been up to the Rhine, and who love to tell us about what they have seen, ever bothered about taking the short side trip to Mettlach.

The founding of the old Abbey dates back to the second half of the Sixth Century. The story of Mettlach and the old Abbey is a very interesting one, but it is of the old Abbey as a pottery factory that we now wish to speak. Over a hundred years ago the Abbey was converted into a pottery. Today the firm employs over 10,000 people; its products have a world-wide reputation; its goods have been awarded more first prizes at world fairs than any other ceramic production.

If a workman wishes to build a house, the firm allows him to select from a number of plans. If he has no land, they advance him necessary cash for house and lot. He is charged three per cent for the money and can repay the principal in two per cent annual installments. Within the last ten years the firm has advanced for this purpose nearly one-half million dollars.

The firm maintains a "School of Advanced Instruction" for youthful employees who wish to perfect themselves in the arts. Those who take up drawing and painting in addition to the other courses, are reimbursed for time spent in attendance at these special classes.

Many of the workmen live at a distance outside of Mettlach in a number of small villages. A special train of the firm's own coaches brings them to work in the morning, takes them to lunch and back at noon, if they live on the line of the railway, and carries them home again at night.

Specially heated wagons provided by the firm call each day at the homes of the workmen living in the suburbs of Mettlach, and bring their noonday meals to them at the factory—piping hot.

Many young women, living at a distance, stop at the convent of the Sisters of San Carlos Borromeo, going home over Sunday. After working hours they are instructed in sewing, knitting, needlework and cooking.

Several dormitories, with restaurants attached, care for many of these youthful employees, both male and female. A day's board and lodging costs them fourteen cents. Five large dining rooms properly fitted up are divided into as many different classes, affording all other employees who wish to take advantage, inexpensive and good meals.

The charges for meals only, begin at eleven cents a day for the three meals, breakfast, dinner and supper. This is in the boys' and girls' department. Men of the second division are charged twenty cents a day, and men of the first division twenty-two and a half cents, the only difference being an extra meat course. One hundred and fifty thousand noonday meals are served annually.

Co-operative stores have been established. Besides being able to purchase commodities at the very lowest prices, the workmen are obliged to pay cash in every instance, preventing the running up of large accounts, which might become a burden to pay. As these stores, in spite of the low prices at which they sell, pay annual dividends ranging from ten to fourteen per cent, they are virtually saving institutions for the customers.

There are many other interesting features, which we must omit for want of space, which include amusement and recreation plans, restaurants, summer gardens, libraries, theatres, gymnasiums, baths, etc.

Is it any wonder that few employees die and none ever resign? Is it even marvelous that a large number of families have been in the employ of this firm for generations? Is it amazing that the firm never had a "strike" on its hands? Hardly.

We must not refrain from adding that pensions are granted, and that when the male employees with ten years' service behind them get married, a fine wedding outfit and contribution is made, and that the same is done with female employees who have served for six years. There are about 1500 people who have rounded out a quarter of a century's service, and about twenty-five who have rounded out a half century.

ANYWHERE WITH DOLLIE

"Can I take my best dressed dollie to heaven with me when I die, mamma?" asked a little girl.

"Why, no, my child," replied the mother.

"Well, then, can I take my next best dressed dollie to heaven with me when I die?"

"No; not even your next best dressed dollie."

"Then I'll take my old rag doll and go to the other place."



"Wear down the lead of the pencil to the desired surface on a piece of waste paper, never on a file or a stone. When it is worn down do not allow the pencil to shift in your fingers."

BACK TO NATURE WITH DIXON'S AMERICAN GRAPHITE PENCILS

Most of us have at some time or another, and a few of us more frequently, felt the fascination of drawing from nature. It may not therefore seem out of place to present a few interesting and instructive excerpts from a charming little book on the subject by Mr. Fletcher G. Carpenter, Director of the Art Department in the East High School, Rochester, N. Y.

Trees in Pencil Stroke is a book of clear, simple suggestions designed for those who care to sketch from nature. The text is accompanied by a number of delightful reproductions, two of which are loaned to us through the courtesy of Mr. Carpenter.

"One must realize at the beginning," says the author of *Trees in Pencil Stroke* "that it is impossible to give a recipe for a pencil drawing which, if followed, will produce the desired results, but there are a number of suggestions, however, that can be given that will help greatly in mastering the subject.

"First is the paper on which the sketch is to be made. A paper that has a gloss to its surface is very unsatisfactory, and one that is rough, such as charcoal paper or water color paper, is equally undesirable. A dull surface of average weight in cream or white will give good results. Such paper is usually found in pad form where school supplies are sold, measuring nine by twelve inches in size.

"Second, care should be used in selecting the pencils. Cheap, poor pencils should be avoided. The graphite in them is not smooth and oily, and often contains a hard particle that will give your sketch a bad scratch at a most unfortunate moment. There are two grades of the Dixon Pencils that prove satisfactory for this work, the "Special Black," No. 312, and "American Graphite," No. 152. In fact, two grades of pencils that can be relied upon to respond under the correct pressure are all that are necessary for out-door sketching. The medium grade to "sketch in" with, and the soft for shading and accenting. The accenting pencil should have a broad, firm lead that will not betray you by breaking when



"Save your blackest strokes until last—they are the jewels of the picture. Use them sparingly."

a jet black stroke is wanted. If the above instructions regarding paper and pencils are followed many discouragements will be avoided."

Here are some additional "don't's" which Mr. Carpenter believes are well calculated to save the amateur from such unnecessary work and unseen pitfalls.

"Always plan your sketch so that there will be plenty of margin room around it. It looks like a picture this way.

"Don't spend hours hunting through the woods for just the shaped tree you have in mind. Sit down on a stump or a stone and sketch the roots and trunk of a tree, a cluster of bushes, a rock and a stump.

"When you have taken a firm hold of your pencil do not allow it to shift in your fingers the least bit until you have finished the strokes in that particular direction.

"The pencil stroke is similar to the stroke in combing your hair. When you have made the firm stroke, lift the pencil point from the paper and start anew, making the second stroke parallel to the first. Do not stroke back and forth, it tangles

the strokes. It would also tangle your hair, would it not?

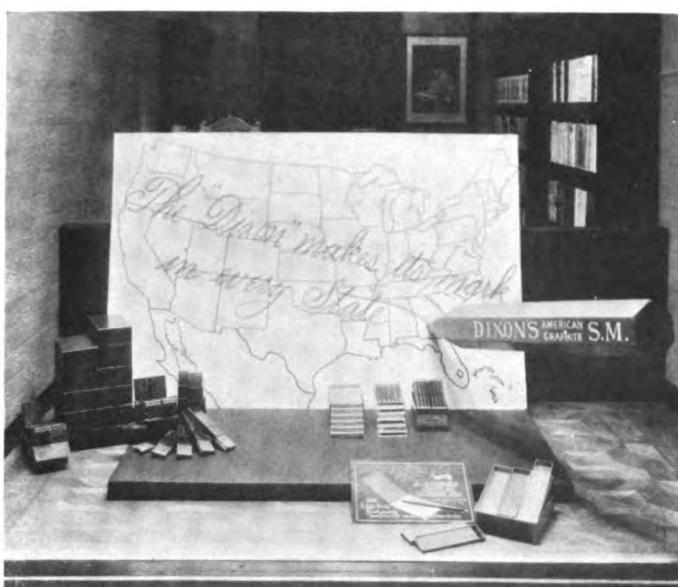
"You will never learn to sketch from nature by copying another's sketches, but when you have copied a sketch, memorize the stroke, and try a similar bit of nature entirely without help."

Trees in Pencil Stroke has met with warm favor among teachers of drawing, many of whom have expressed highly complimentary opinions of Mr. Carpenter's work.

Miss Florence Stowell, supervisor of drawing, Rome, N. Y., says that "it is extremely practical and helpful and a little later I shall want to order some for my classes to use with their Dixon's No. 312 Pencils."

Miss Sarah Y. Raymond, supervisor of drawing, Ogdensburg, N. Y., says: "It will help me in my classes. He's right about the Dixon Pencils."

Miss Sarah E. Veeder, supervisor of drawing, Lyons, N. Y., writes that "the author seems to have his subject well in hand" and Miss Anna L. Ward, supervisor of drawing, Seneca Falls, N. Y., writes: "Its suggestion on the subject are certainly helpful."



ABOUT N. C. R. ORGANIZATION

"When death and disaster," wrote Elbert Hubbard in the *New York American*, "in the form of flood and fire, swept Dayton, John H. Patterson arose with the tide to the level of events."

"Responsibilities gravitate to the men who can shoulder them and dire difficulties are taken care of by men who know how."

"Patterson is the man, more than any other, who brought cosmos out of chaos."

"When the flood was rising and nobody knew what the result would be, John H. Patterson began to wire for motor-boats. He did not ask, he demanded. And the motor boats came."

"Patterson took all of the carpenters from the National Cash Register—one hundred and fifty skilled woodworkers—and set them to work making flat boats."



"The entire force of the great institution was at the disposal of the people who needed help. And not a man or a woman was docked or dropped from the payroll. Everybody had time and a third."

"As for John H. Patterson himself, he worked in three shifts of eight hours each, and for forty-eight hours he practically

neither slept nor ate. And then, by way of rest, he took a Turkish bath and a horseback ride and forty winks, and was again on the job—this man of seventy, who has known how to breathe and how to think and who carries with him the body of a wrestler and the lavish heart of youth!"

Is it any wonder, with a man like John H. Patterson at the helm, that the National Cash Register Company outgrew and absorbed competition?

Many concerns have a keen appreciation of the value of advertising, but few have the knowledge that transforms appreciation into million dollar assets of good will.

The National Cash Register Company uses all kinds of advertising mediums, and at Dayton, in a beautiful arcade, is maintained a unique exhibit of window displays under the supervision of the Window Display Department, managed by Mr. S. B. Van Horn.

It is estimated that over forty thousand persons pass through this arcade. Each window display represents a distinct class of retail trade and is designed to offer suggestions to wide-awake retailers. The stationery and book window has been reproduced before in GRAPHITE and the accompanying illustrations are later displays of Dixon's American Graphite Pencils.

The display in which the giant pencil is hung suspended in the air, was reproduced in a recent issue of the "N. C. R. Weekly," the effective house organ of the National Cash Register Company. "The whole keynote to this window," says the "N. C. R. Weekly," is simplicity, and it was arranged with the idea of making it adaptable to any book or stationery store. Any book store will find that this window advertisement will attract the attention of passersby and call their attention to one of the staples of the book and stationery stores."

RECIPE: Take a good* stock of Dixon's American Graphite Pencils; mix thoroughly with a quantity of "know how"; add a pinch of inspiration and allow the result to cool in the window. If the result whets the appetite of passing pedestrians, you may do your fellow chefs a good turn by training a Kodak on the dish. Send a print to the editor and your contribution to the trade will be presented via GRAPHITE.

*Refers to quantity—you cannot buy any other quality.

THERE never has been a chess player before Capablanca, the Cuban chess champion, who paid so much attention to outdoor sports and one who actually made it a point to build up his body in all directions. We read in *The Cuba Review* that Capablanca plays billiards, pool, baseball, lawn tennis, etc., things which benefit his body and health to a great extent, thus being an all-around athlete. He therefore, when sitting down to a game of chess, never knows the word fatigue. His mental capabilities are always fully at his command, and that is one great secret of his success. On the other hand, he has two other great qualities. He does not smoke and he does not drink alcoholic mixtures in whatever shape. It has been said that in chess playing non-smoking and non-drinking is almost equal to a pawn and move. Capablanca is disposed to be very light-hearted. He can laugh like a young boy and can enjoy a joke at any time. All these things go to give him a better grip on life, and is worth the attention of those who may not be chess players.



TETZLAFF WINS OWENSMOUTH ROAD RACE

At Owensmouth, on March 29, Pacific Coast automobile racing fans were again treated to a thrilling exhibition of speed by "Terrible" Teddy Tetzlaff, holder of the world's road racing record.

Leading a large field of competitors around the five and one-half mile course, Tetzlaff covered two hundred and fifty miles at the rate of 70.55 miles per hour in the Free-for-all Race. Barney Oldfield in a Fiat finished in second place.

Both Tetzlaff and Oldfield lubricated their cars with Dixon's Graphite Automobile Lubricants. The following telegram from Tetzlaff is a pleasing acknowledgement from the famous pilot that his victory and Oldfield's good showing were partly due to the cause of Dixon's Lubricants.

LOS ANGELES, CAL., March 31, 1913.

Won 250 mile Owensmouth Road Race Saturday, March 29. Dixon's Graphite Automobile Lubricants again proved their good qualities by landing me in first place with average of 70.55. Oldfield also used Dixon's Graphite Automobile Lubricants and won second place in Fiat. Dixon's best grease on earth!

TEDDY TETZLAFF.

Siefert, a well known Pacific Coast driver, won the Owensmouth Light Car Race in a Mercer and Joe Joerimann in his Maxwell secured second place. Both of these drivers use and recommend Dixon's Graphite Automobile Lubricants.

EDUCATIONAL PRESS

Harrison Square

BOSTON, MASS., Feb. 25, 1913.

Joseph Dixon Crucible Company,

Jersey City, N. J.

GENTLEMEN:—I am writing to tell you of the good success I have had during the past two years by using Dixon's Boiler Graphite No. 2 as a scale preventative.

We are running a Dillon Horizontal Tubular Boiler of sixty inch diameter. The scale which gathered at the back end of the boiler at the blow-out gave me considerable trouble. It formed so thick that a cold chisel was needed to chip it out.

Two years ago, after freeing the boiler from all scale and foreign matter, we smeared the surface around the blow-out with your Boiler Graphite No. 2, scattered a quantity into the tubes and now and then used a quantity in the feed water. Upon opening the boiler for inspection a year

later, we found the surface to be perfectly clear and free from scale or any other foreign matter.

The boiler is at the present time in perfect condition, due to your wonderful graphite.

WILLARD FORCE, Chief Engr.

GIRL SENIORS CHEER VISIT OF DIXON MAN

Ozark, Ala., School Girls Miss Latin Lesson and Toast
the Cause of Its Postponement

"TOAST"

Pencil Man, Pencil Man,
How we wish u'd be on hand
Every morning at half past eight,
To let us out of the Virgil we hate.
Success and joy crown your way
If you help "Seniors" every day.

Rah! Rah!

Rah! Rah! Rah!

Dixon's! Dixon's! Dixon's!

This is the toast that greeted the eyes—yes, eyes—of the Dixon representative who took that midnight train for Alabam' and landed in Ozark.

If the toast is not well done it is only because the metre was given no quarter—ahem!—and not because the toastmistress lacked in ardor, enthusiasm and gratitude.

It all happened as the senior class was upon the verge of its Virgil lesson. The door opened and in walked the Dixon man. His appearance, as it would seem from subsequent events, possessed for certain seniors all of the qualities of being dramatic, for as he seated himself with the evident intention of remaining until the superintendent became thoroughly acquainted with the many reasons why Dixon's Pencils are used in schools throughout the country, a sigh of relief wafted itself about the room. Gradually, as the minutes passed, it dawned upon a delighted senior class that it had escaped for that day at least a dull part of its work.

Ten—twenty—thirty and even forty minutes passed ere the superintendent could tear himself from the interesting demonstration of his visitor. In the meantime the girls, or at least the dozen or so whose initials are signed to the document upon which appears the above combination of toast and cheer, together with the following note, were devoting their time to the preparation of a fitting eulogy of their saviour:

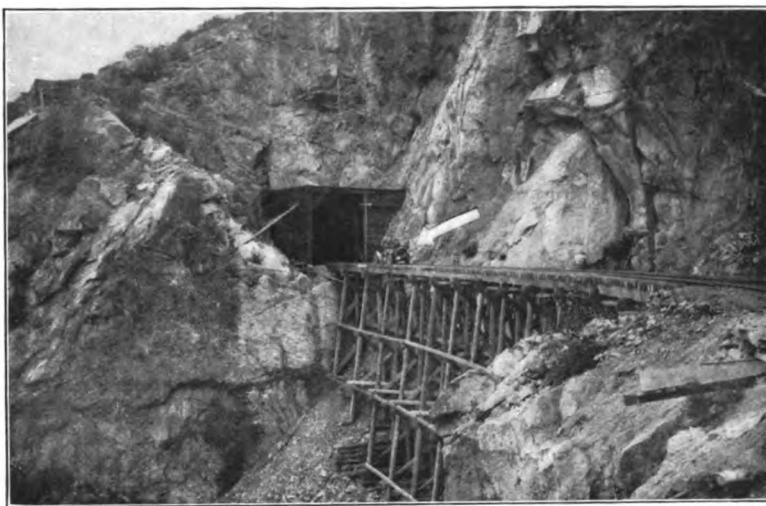
"DEAR MR. PENCIL MAN:—

"We wish to thank you for your kindness toward us poor little school kids. Instead of having a dull old Latin lesson we had a nice jolly forty minutes all to ourselves, and here's hoping you will sell so many pencils that your company will have to put on special delivery wagons."

"GIRLS OF THE SENIOR CLASS."

And so this interesting document reached its intended destination; also came to the attention of Mr. J. H. Lewis, manager of the Southern Territory for the Dixon Company, and finally reached the editor of GRAPHITE.

Mr. Lewis is contemplating a change in the itinerary of the representative who made this trip and possibly, if no occasion to put on special delivery wagons arises, Mr. Lewis will make the trip himself.



RIDING THE RAILS ON THE WHITE PASS AND YUKON R. R. IN DARKNESS AND NORTH OF 60°

Upon completion of his celebrated tour through North America, Dr. Chas. G. Percival, editor of *Health*, wrote the following: "In my two years journey of 55,000 miles in the 'Bull Dog' automobile I found that your Graphite Grease No. 677 is, without doubt, the best lubricant for the transmission and differential gears I have ever used. Your Cup Grease is also unsurpassed for cups and wheel spindles. This has proven to be the longest trip ever made with one car, in the history of the industry. When you remember that I had to suffer all sorts of climatic changes, ranging from 130 degrees above zero in Mexico to 20 degrees below in the Arctic Circle, and that I crossed the continent from Frisco to New York in mid-winter, you will see that I must have given the grease some severe tests and am confident to give expert opinion. The fact that the 'Bull Dog' stood up so well without replacement of transmission or differential is as much a credit to your lubricants as it is to the manufacturer of these parts."

WHY IS IT?

That a legless man can "put his foot in it"?

That persons who are "consumed by curiosity" still survive?

That frequently a sinking fund is used to meeting a floating debt?

That straining the voice is not the proper way to make it clearer?

That we speak of a stream running dry when the only way it can run is wet?

That wives should expect their husbands to foot the bills without kicking?

That we talk of some one "going straight to the devil" when he has to be crooked to go there?—*Boston Transcript*.

A PLEASED CUSTOMER

One of our customers writes us as follows:

"Enclosed find N. Y. Draft for \$1.76 in settlement of your invoice of February 2.

"The brushes furnished are certainly fine and when we need more will send you the orders."

A SALESMAN

When the train pulls in and you grab your grip,
And the hackman's there with his frayed-out whip,
And you call on your man and try to be gay,
And all you get is, "Nothing doing today;"

Then you're a peddler,
By gad, you're a peddler!

When you get into town and call on your man,
"Can't you see any, Bill?" "Why, sure, I can,"
You size up his stock—and make a rough count,
And "Bill" presently says, "Send the usual amount,"

Then you're an order taker,
By gad, you're an order taker!

When you travel along and everything's fine,
And you don't get up till half past nine;

When you see each concern and talk conditions,
And write it all home with many additions,

Then you're a traveling man,
By gad, you're a traveling man!

When you call on your trade and they talk "hard times,"
"Lower prices" and "decided decline,"
But you talk and you smile—make the world look bright
And send in your orders every blessed night,

Then you're a salesman,
By gad, you're a salesman!—*Anonymous*.

SOME PAST AND PRESENT HISTORY OF ELECTROTYPEING*

With Special Regard to the Wet Metalizing or "Graphitizing" of the Mold and the Koehler Wet Graphiting Machine and Process

When Benjamin Franklin reached into the sky with his flying kite and proved that the bolt of lightning was electricity, he never dreamed of the mighty ally, the electrotyper, this force was to create for his own trade of printing. But he and many other scientific minds were truly pioneering the way while studying this wonderful power, and in time one of them, Daniell, built his famous cell, which would generate the lightning's force, electricity. At the same time came the discovery that in the process of generating electricity, pure metal, copper, was deposited at one pole of the cell and here began the age of "Electro-Metallurgy."

Later, in 1836, a keen-eyed investigator, by this same cell produced a perfect scratched copper plate through deposition of copper out of a sulphate solution, and proclaimed a new art for man's use. But it was reserved to Jacobi and Spencer, and in 1839 Spencer announced his ability to reproduce exact duplicates of medals, or engraved plates, by use of electricity and forthwith electrotyping sprang into life.

Accident—two accidents in fact—wrought the wonderful discovery. By mistake Spencer substituted a copper coin for the usual piece of copper used in a somewhat modified form of Daniell's cell and, behold, when the deposited metal was removed there appeared to his astonished eyes an intaglio copy of the coin. Later, by another accident, some varnish was dropped on part of the copper used in the cell and, behold, no copper was deposited on the surface thus made non-conducting. Thrilled by these two results he made many ex-

periments and finally attained absolute success. All growth since has been only a broader development of the fundamental ideas thus given to the world.

Very soon the cell was divided into two parts, broadly speaking, a separate battery for the current and a bath for the chemical deposition of the metal. For many decades the "Smee" was the standard type of battery and became almost a synonym for electrotyping in its kindred art, electroplating.

Then about 1875 the dynamo replaced the battery, proving to be the greatest step in advance since the discovery of the art, inasmuch as the time of producing plates was thereby cut down to quite one-fifth that of the electric battery days.

The Daniell cell, the separate battery and the introduction of the dynamo, are the historical landmarks of the art. Recently another has been added—"wet"—metalizing of the mold. Why landmark? Because electrotyping is the art of reproducing by electrical means in copper or other metal an exact duplicate of an object called the "original." Perfect or absolute success is attained when the duplicate equals the original without a tangible or visible variation. If the electro-type be for printing, it is essential that the printing quality of the duplicate shall equal that of the original absolutely and in all respects. Never can the duplicate be better than the "original," for the highest point reproduction can reach is equality. While every process in the operation of electrotyping has benefited by labor-saving devices, improved methods and materials, yet heretofore it has been impossible for the electrotyper to produce a perfect duplicate—i. e., one absolutely equal to the original. The cause lay in the method used to "metalize" the mold. Whether done by hand or brush, either process always prevented equality by deteriorating the mold before the deposition of copper began. By the A. R. Koehler Process of "wet" black leading, the mold is metalized without a flaw, and exactly as it came from the original, without the slightest touch of hand or brush to mar or distort.

The operation of electrotyping is described briefly thus: a large pan or "case" is filled to a depth of about one-quarter of an inch with a hot composition, usually of beeswax or ozo-kerite. When this has cooled to a proper temperature, dry graphite (black lead) is spread over it and any surplus failing to adhere to the composition is removed by a brush. The object to be electrotyped is also carefully brushed with graphite to prevent its adhering to the beeswax. Then the object is placed face downward on the beeswax, which is kept warm, pressure is applied by toggle or hydraulic power and an exact impression is made in reverse of the object. The beeswax now becomes the "mold." This mold is dressed and a "building" process follows, whereby low places are built up or elevated with hot wax, great care being required, for a drop of wax, carelessly placed, may require a new mold. These built up places in the completed electrotype are the large white or unprinted parts, and must be much lower than the printing surface. Then follows the black leading of the mold, the crux of electrotyping, whereby its surface is made a conductor of electricity—wax and its allies being non-conductors. This black leading should be absolutely perfect—every dot, period, line or printing surface being thoroughly polished with dry graphite, because where no graphite is properly rubbed on, no copper or nickel will be deposited, and this flaw later will destroy the work in hand.

In the early days of "dry" polishing, black leading was done by hand. An air-tight glass box was used with a leather sleeve attachment through which the arm might pass, and looking down through the glass and polisher, by slow and tedious rubbing his hand, "brushed up" the mold, taking from a half to three-quarters of an hour for every one. Later a brush leading machine replaced this method, but the machine always had its drawbacks, for it is next to impossible to prevent the brushes from pounding and spreading the details of fine work.

Innumerable attempts in the past have been made to find some better way to "metalize," or render conductive, the mold, but all proved impracticable or failures, ending in a return to the great inconvenience of doing the work by brush, until the recent invention of the A. R. Koehler Patented *Wet* Process solved the difficulties. In this new method there is no polishing of the mold by brushes, but it is placed at once in a bath of impalpable (or finely pulverized) graphite (or black lead) and water. A suitable pump forces the liquid, under a pressure accurately gauged, through a movable discharge spout or nozzle directly against the surface of the mold, so that every part and portion is completely and evenly coated.

By the "dry" method, after black leading, the mold was ready for the iron filings which were to be coated over it with sulphate of copper to give the copper coating a start when electricity was applied. This is called "oxidizing." The dirt and air bubbles were washed off in a bath of water.

By the A. R. Koehler Wet Method, the whole process of oxidizing is eliminated.

Wherever quality, the twin brother of efficiency is considered before all other things—there, also, will be found Dixon's Graphite or Blacklead Productions.

In the electrotyper's art as in other trades, it has been demonstrated that the man who increases the cost of his product through increasing the quality of his materials, need never be in doubt about finding a market.

Dixon's Electrotyping Graphites help to make better plates. This has been proven over and over again during the many years of its use in shops all over the country. Its uniformity is today commended by the best known concerns.

With Dixon's Electrotyping Graphites, users of the Koehler Wet Graphiting Machine and Process are assured of the best results. The Buffalo Electrotype Works, with which firm Mr. Andrew R. Koehler, the inventor of this new machine is connected, have demonstrated to their entire satisfaction that Dixon's Electrotyping Graphite is thoroughly suitable to the requirements of the new process.

*This article is mainly taken from "The End of the Black Lead Brusher," by Mr. Frank H. Clark, president of the Eclipse Engraving and Electrotype Company, Cleveland, O. Mr. Clark's booklet is said to be the most expensive printed advertising matter ever sent out by an electrotyper to the buyers of electrotypes.

AN OLD SCOTCH ADAGE

Thrice the age of a dog is that of a horse,
Thrice the age of a horse is that of a man,
Thrice the age of a man is that of a deer,
Thrice the age of a deer is that of an eagle,
Thrice the age of an eagle is that of an oak tree.

THE LAW!

Leslie's Illustrated Weekly calls attention, editorially, to several instances that came under the rebuke of the law and where the law was manifestly unjust, and it adds: "The meaning of the Sherman Anti-Trust Law is not clear. Every succeeding opinion of the United States Supreme Court, regarding it, is awaited with profound interest. When business men appeal to the federal authorities and ask how far they can go and what they can do under the law, they are told that they must take their own risks and that no advice can be given. Is it strange, under such conditions, that the law works injustice? If we are to have continued prosperity, our business men must know the full extent of the limitations that the law seeks to place upon their activities. The sooner this is known the better."

The same publication also states how "some persons who didn't expect it are finding out how it feels to be busted under the Sherman Anti-Trust Law." It seems that the members of a Wholesale Grocers' Association published a "Green Book," the purpose of which was to prevent retail dealers and consumers from buying directly from manufacturer and producer. The grocers were very much annoyed by this interference with their business and naturally we could not blame them, but what did they expect when they stood on the highways and joined in the mad outcry against the captains of industry? They have now been charged with contempt of court for violating an agreement made with the government a year ago.

A so-called "Stone Trust" has been brought into court at Cleveland. It is not exactly clear what this "Stone Trust" is. The Cleveland Stone Company is accused of having acquired a monopoly in the building, paving, curbing and grind-stone business and also of fixing prices for its commodities. The government is especially opposed to fixing prices. Everybody knows that a fixed price is the most satisfactory thing in business. The workingmen know it, for the labor unions fix the rates of wages without objection from the government or any one else.

One of the greatest evils in business is found in price cutting. Instead of being advantageous to the consumer, it is a drawback.

Leslie's Illustrated Weekly goes on to say: "Let no one accuse us of defending wrongdoers. If the wholesale grocers of the South, or the stone dealers of the West have been violating the law, they should be punished. We do not believe that they purposely have intended to be law breakers, nor do we believe that any one can tell exactly what the meaning of the Anti-Trust Law is. There is no authority to which an appeal can be made as to what a corporation can do without violating the law. It is told to go ahead until it is called to account. This may be law, but it is not equity. This may be law, but it is not justice. This may be law, but it is without reason."

PUT paris green on your worry-bugs. Blow flea-powder on your fear-insects. Deposit a few poisoned biscuits where your remorse-rats can get them. Kill off everything that holds you back. Fumigate your whole darn frame. Clean house. Start fresh. Think, and think a lot of yourself. If you don't deserve this self-respect, buy a lot more poison.

—*Ad League Bulletin.*



"I always thought," said old Jerry as he sniffed at the particularly bad odor of a salesman's cigar, "that nothin' was as rank as the stuff some roads use on the front ends of their locomotives.

"It used to gag some of the boys," continued Jerry, "the first day it was put on and, believe me, those days came thick and fast. The blamed stuff burnt off almost as soon as it was put on.

"No, I never had no trouble on Old 689. I always used a DIXON GRAPHITE preparation—some of the boys likes a natural gray and some a black finish and some likes a powder and others a paste—DIXON makes 'em all. Sweet and clean and always lasted from six to nine weeks.

"Sure you can get a testin' sample. Write as I did and ask for folder and free sample No. 190-F."

Joseph Dixon Crucible Co.

Established 1827

JERSEY CITY, N. J.

GRAPHITE



VOL. XV.

JUNE, 1913.

No. 6.

Issued in the interest of Dixon's Graphite Productions, and for the purpose of establishing a better understanding in regard to the different forms of Graphite and their respective uses.

A "COMPETITIVE" TARIFF

It was the late Thomas Reed who said: "Everybody has a perfect tariff bill—in his mind, but, unfortunately, a bill of that character has no extra territorial jurisdiction."

President Wilson's idea seems to be that we should have a competitive tariff. He says, "the object of the tariff duties henceforth laid must be effective competition, the whetting of American wits by contest with the wits of the rest of the world." It is self-evident that the makers of the so-called Underwood tariff did not consider the great difference in cost of foreign and American labor.

Speaking for American lead pencil manufacturers, let us say that the cost of labor alone is nearly eighty per cent of the cost of a lead pencil,

while the cost of labor, if we were paying European wages, would be about fifty per cent.

There are two American pencil companies that also operate factories in England—the Eagle Pencil Company and the American Lead Pencil Company.

The Eagle Pencil Company have made the statement that they pay to the employees in their London factory \$3.48 average, against \$10.72 per employee per week in their New York factory.

The only reason why these two pencil companies operate pencil factories in England is because the difference in the cost of labor made it impossible for the New York factory to compete with the German and Austrian pencil manufacturers in any country outside of America.

The United States tariff heretofore has been forty-five cents per gross and twenty five per cent ad valorem.

The Austrian pencil manufacturers, who are the best equipped in the matter of low labor cost, excepting the Japanese, when asking the United States to lower its tariff on lead pencils, suggested that it would be an equitable and just revision if the rates were made "not to exceed twenty per cent ad valorem and not to exceed twenty-five cents per gross specific."

The tariff proposed in the so-called Underwood bill is twenty-five per cent ad valorem, an entirely inadequate tariff, as our Austrian friends would concede, although they will greatly rejoice at the unexpected and unnecessary generosity of Uncle Sam.

What the result will be if the proposed new tariff goes into effect no one can fully tell. We do know, however, that even under the present tariff no American pencil manufacturer could compete in price with the foreign maker unless he established a factory abroad where he could obtain cheap labor. We also know that two pencil manufactories, which have been established five to seven years or more, have not been able to declare a dividend as yet and will more than likely be obliged to close.

We know that there are twenty thousand or more people in the United States engaged in business connected with pencil making, all of whom suffer by a reduction in the tariff for which there apparently was no good reason, as no person will be able to buy a pencil any cheaper than before and the foreign pencil makers had asked for no such reduction.

ALL IN THE SAME BOAT

The Dixon Company, through its widely differing products, comes in touch with many different industries, and in the past few weeks of violent tariff agitation, the Dixon Company has received letters asking for help for the many different industries that are sharply affected by the proposed tariff reduction.

We have been able to answer but few of these letters because of the great number, and because we are in the same boat.

There has been for some years a specific tariff of forty-five cents per gross on all foreign pencils coming into the United States. It is proposed to do away with this duty of forty-five cents per gross. If this tax is removed no new pencil company can possibly start in the United States and probably several of them now in existence will be obliged to close their doors. The older established pencil companies may be able to hold on and do business at little or no profit until such time when the government can correct what will undoubtedly be a very grave error if the forty-five cent per gross is done away with.

A DIXON'S "ETERNO" FOR THE MOTORIST

Be sure to incorporate a piece of indelible pencil in your tire kit. It is absolutely invaluable in the repair of punctures, especially when small. After the vicinity of a puncture has been solutioned, the exact location of the puncture is usually invisible, unless an indelible pencil has been employed to mark it.—*Motor Print.*

It's the easiest thing in the world to know how to succeed, after you have failed.

ESTABLISHED 1827



INCORPORATED 1868

**JOSEPH DIXON CRUCIBLE CO.**

JERSEY CITY, N. J., U. S. A.

**Miners, Importers and Manufacturers of Graphite,
Plumbago, Black Lead.**

OFFICERS:*President*—GEORGE T. SMITH*Vice President*—GEORGE E. LONG*Secretary*—HARRY DAILEY*Treasurer*—J. H. SCHERMERHORN*Ass't Sec'y & Ass't Treas.*—ALBERT NORRIS**DIRECTORS:**

GEORGE T. SMITH

GEORGE E. LONG

WILLIAM MURRAY

EDWARD L. YOUNG

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HARRY DAILEY

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SAN FRANCISCO SALESROOM, 155 Second Street.

CHICAGO OFFICE, 1324 Monadnock Block.

BOSTON OFFICE, 347 John Hancock Building.

PITTSBURGH OFFICE, Wabash Terminal Building.

ST. LOUIS OFFICE, 501 Victoria Building.

BALTIMORE OFFICE, 1005 Union Trust Building.

BUFFALO OFFICE, 72 Erie County Savings Bank Building.

ATLANTA OFFICE, Fourth National Bank Building.

EUROPEAN AGENTS,

Graphite Products, Ltd., 218-220 Queen's Road, Battersea, London.

PUSHING DIXON AUTOMOBILE GREASES

"Dixon Week in Philadelphia" is the title of a campaign launched by the Joseph Dixon Crucible Company, bringing attention to a general display of its lubricants in the windows of the Keim Supply Company, 1227 Market Street; Gibney Motor Supply Company, 215-17 North Broad Street; Fischer Auto Supply Company, 1415 Filbert Street; Charles S. Smith & Company, 302 North Broad Street; George W. Nock Company, 126 North Fourth Street.

These exhibits will be accompanied by large photographs of many of the noted speed kings of the country, who have strongly indorsed the Dixon products, together with copies of telegrams and letters from these racers, expressing their appreciation of them.

The Dixon Company is calling particular attention to its graphite transmission and differential grease. The makers compound in the proper proportions the Dixon Ticonderoga Flake Lubricating Graphite, finely pulverized, with the best grades of mineral greases, and in gear lubrication the principal feature is that the graphite forms a veneer-like coating on the gear teeth, which really acts as a cushion—thus reducing the wear and noise to a minimum.—*Philadelphia Press*.

THE CAUTION OF SCIENCE

We are told that the man who rushes to conclusions might well believe that scientists are persons who talk much and accomplish little of importance. Such a man is wrong in both respects. Much nearer the truth it would be to say that the more important the accomplishment of a scientist the less it is talked of.

That which attains sudden popularity is usually something that is soon forgotten or lost in use.

For nearly fifty years the Dixon Company has been advocating the use of flake graphite as a lubricant. Careful and painstaking scientific men and careful and thoroughly practical men have from time to time made most elaborate tests of graphite as a lubricant—not only of graphite *per se* as a lubricant, but of the various forms of graphite, flake, crystalline and amorphous, and have published the results of their tests, which showed most conclusively that flake graphite is an indispensable article in the hands of every man who has anything to do with lubrication problems.

Yet the general use of graphite as a lubricant has been of very slow growth. Unfortunately those who wished to test graphite did not succeed in getting from their supply man the right kind. Sometimes they were offered "something just as good" or they accepted some brand of graphite well advertised, but not of the proper kind, even though of great purity.

There is nothing difficult to understand about graphite lubrication. It is only necessary to use a tough, pure and very thin flake graphite mixed with some suitable oil or grease which aids in carrying the flakes of graphite to all parts of the bearing surfaces. These thin flakes form on the bearings a veneer-like coating of marvelous smoothness and endurance. The particular value of Dixon's Flake Graphite lies in the fact that there is no other graphite mined that shows such thin and tough and durable flakes. There are other graphites that are quite as pure, but none so efficient.

The public has been very slow to learn and understand the difference between graphites, and more especially the proper use of it, which chiefly consists in using but a small quantity instead of large doses. As too much strength applied to the monkey wrench means a stripping of the threads, so too much graphite in a bearing means a binding of the bearing and a possible condemning of the graphite itself.

UNDER THE caption, "The Breakfast Table," the *London Economist* tells us that Mr. John Bull receives \$29,757,275 revenue through import duties on tea and \$849,676 on coffee. Tea is evidently the Britisher's main drink in the morning. He uses, however, quite a large quantity of chicory, cocoa and chocolate.

WHY DRAWING SHOULD BE TAUGHT

By DAVID VARON

(Formerly Professor of Architecture at Illinois University)

Heretofore drawing has been regarded by the average man of the rural district as a superfluous accomplishment, that only the children of the rich could afford. For him, a boy ought to know only reading and writing and some figuring. What else does a child of the farm need to know? As to the girl he insisted, perhaps, on her knowing cooking and sewing, rather than any other branch of knowledge that might agitate her mind.

If all children born on a farm were predestined by Nature to be farmers, such reasoning would be perfect. But nothing can foretell at the birth of a child what his destiny is to be. Where did the great Lincoln originate? Was he not a farmer's son?

To determine a child's future, one must give it opportunities to develop its mind on all lines. One must first allow it to take an outlook of the Universe until it hears or sees the particular thing that vibrates in harmony with its own soul.

With these facts in view, we must include in our curriculum of the rural district school most of, if not all, the branches of teaching included in that of the city school. As such, drawing is entitled to find its place.

I would say, moreover, there are moral, national and economic reasons to show that the teaching of drawing should take precedence above other subjects, as algebra, for instance, where the child's mind is compelled to work with abstraction. Here I touch the most important point of pedagogy, on which I shall speak later on.

From the practical standpoint drawing is necessary today more than ever, since farmers are growing more and more industrious. You see them improving not only the soil, but the premises. New ideas bring about changes in stables, barns and in the dwellings. Most of these changes cannot be done offhand, but have to be carefully studied out on paper. In this way, there arose the necessity of sketching, either mechanical or freehand drawing.

Assuming that a farmer wants to build himself a mansion, he will first of all feel the need of making a fair sketch of the plan and of the appearance that he has conceived for this mansion. In this way he can much better carry out the realization of his ideal home, in co-operation with the architect or with the contractor. Much friction would be avoided and many original features could be thereby added to the commonplace farmhouse, features which would show the intellectual and aesthetic development of the American genius on the farm. This is in itself sufficient to make evident the practical side of drawing.

As to girls, there is none to whom drawing is not of importance, if it were only to copy a pattern for a skirt, or to make the slightest ornament for a Sunday dress.

But even for the peace of the house, drawing is as necessary as music. For one thing, let me say, an appropriate piece of drawing, cleverly executed, will more often stop the yells of a young child than a soft lullaby.

From the moral point of view, we see in drawing a factor that goes to open to the mind a wider horizon. For to study drawing is to study art in one of its representations; and as there is always a co-relation between the arts, drawing will

facilitate the understanding of the others, namely, literature, poetry, sculpture, music, etc., and vice-versa. The fact that the child's mind will be busy in leisure hours with such high pursuits, is greatly to the advantage of the development of a higher morality.

From the national point of view it is of paramount importance that we give every child all the chances possible, on all lines, as said before, until he strikes the string that vibrates in tune with his natural instinct. Go to the biography of the greatest artists; you will be astonished to find that in almost each case they originated in very humble villages, where they were apparently dull, clumsy, with no abilities whatever; but they were in some way or other given their opportunity. Their heretofore slumbering ambition was awakened by a spark, and henceforth the child needed no more stimulant; on the contrary, teachers and parents alike felt the need of restraining his impulses.

As to the economic side, the teaching of drawing cannot be overrated, since it helps to develop in the child a sense for the beautiful. This in turn will show its effects not only on things daily in use, not only on the girls' and boys' clothing, not only in the furnishings of the house, all of which they will want to see more beautiful, but it will have its echo in all the aspects of the village, which will make for general prosperity. Let the teacher analyze for the little ones some picture, a beautiful landscape, for instance. He will show how things are made harmonious, simply by pursuing the combination of nice proportion, whether it be in line or in color. The child will find out that a picture after all is very much like nature, and by degrees the picture will reveal to him the true paradise in which he is living, should he only know how to make elimination, either in his imagination, like the artist, or by real work, removing whatever mars the view, he will more and more learn to be happy. His mind trained to the perception of beauty in nature, nothing will induce him to stay in the city more than the time required for business transactions. Would not this, if realized, be the greatest achievement for that most meritorious and at the same time modest body of society, namely, the district school teachers?—*Popular Educator*.

WHY REDUCE THE TARIFF ON LEAD PENCILS?

Lead pencils have played no part in the "cost of living" today. Lead pencils have not participated in the upward trend of prices. They are cheaper today than ever, due to the competition of six United States pencil manufacturers.

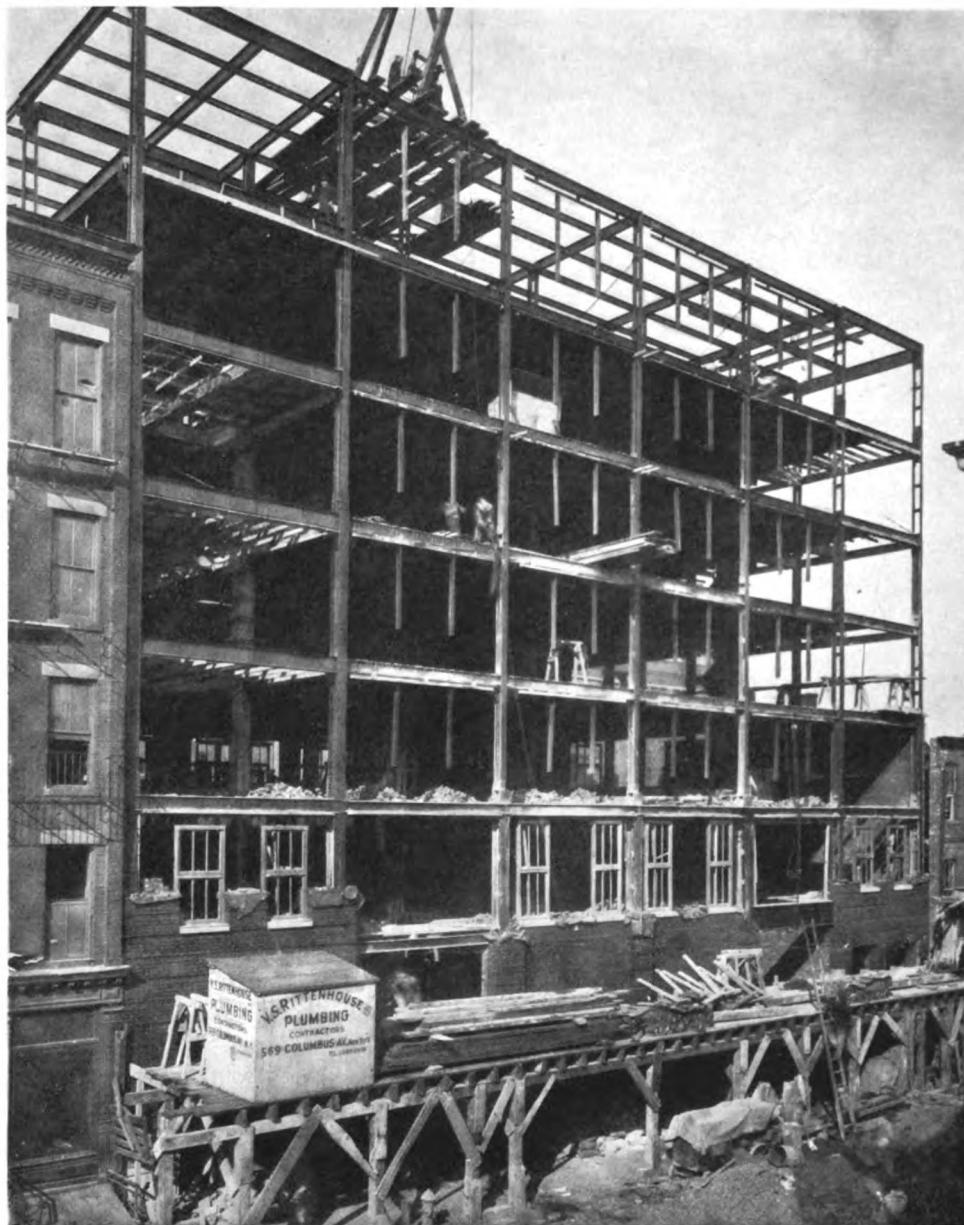
The lead pencil industry in the United States was made possible only through a protective tariff sufficient to offset the low cost of foreign labor.

Factory labor in Germany, where the greatest quantity of lead pencils are made, is only one quarter of what it is in America.

Reducing the tariff as proposed will make no saving to the user of a lead pencil. The consumer gets no benefit. A few large dealers may buy foreign pencils cheaper. The foreign pencil makers will benefit largely and no one else.

The wages paid today in America in the pencil industry amounts to hundreds of thousands of dollars.

The reduction in the tariff on lead pencils as proposed will mean serious injury to both capital and labor, and the benefit practically go to the foreign manufacturer only.



HOFFERBERTH BUILDING, NEW YORK CITY

Here, in the course of construction, is reproduced the seven story Hofferberth Loft Building, owned by Mr. Chas. Hofferberth and located at 531 to 539 W. 21st Street, New York City.

The steel work shown in the above illustration of this structure is protected with two coats of Dixon's Silica-Graphite Paint against the corrosive influence of dampness and other enemies of structural steel. A new edition of our list of "Notable Buildings" protected with Dixon's Paint includes many new structures and strengthens more than ever our claims for its durability. Write to our Paint Department for a copy of the "Notable Building" list.

Clark & Clark, architects; I. S. Rossell, General Contractor, and J. A. Fitzpatrick, Inc., Consulting Engineers and Steel Contractors, were the firms whose services combined to make the Hofferberth Building a well planned and substantial structure.

MAKE the most of your opportunities, but be careful whom you consider your opportunity.—*Houghton Line.*

IN THE SAME CLASS

The "Fra" in one of his heart-to-heart talks, tells us that very few deaths are natural. Men die because a part gives out and you can't replace the part. Therefore, when you have a hot-box or get short-circuited, you scud for the surgeon and he removes the offender, and you go through life with one cylinder, somewhat proud of it, mentioning the fact to neighbors and marveling that you can run at all with one kidney and no appendix. Boss Snyder says it is very much the same with an automobile or other piece of machinery, except that you can replace the part, only it is usually a costly process to do so. When it is machinery that you are considering, the proper thing to do is to keep the parts in such condition by the use of Dixon's Flake Graphite that the oil or grease can effectually do their part.

With scored or rough bearing surfaces the best of oil or grease will fail. By graphiting bearing surfaces, a veneer-like coating of marvelous smoothness and endurance is formed.

As a rule the sick man or a sick machine spells a neglect somewhere.



**FENCE AT RESIDENCE OF Mr. W. A. WOOD,
HAMILTON, CANADA**

Pictured above, through the courtesy of its owner, is the residence of Mr. W. A. Wood at Hamilton, Ontario, Canada. In front of this residence is seen the fence which some two years ago Mr. Wood decided to paint with Dixon's Silica-Graphite Paint.

"I was certainly delighted," wrote a Dixon representative, "upon a recent inspection of this fence to find that our Natural Color makes such an artistic appearance. For certain purposes Dixon's Paint seems to be particularly adapted and upon iron fences it is not only more lasting than other paints but possesses an appearance of substantiality and dignity beyond the ordinary."

Mr. W. A. Wood's firm is Wood-Vallance & Company of Hamilton, Ontario, the largest wholesale hardware concern in the Great Dominion. This firm has become large distributors of Dixon's Silica-Graphite Paint during the last few years and it was no doubt due to the excellent reports Mr. Wood received concerning Dixon's Paint that led him to adopt it for his own use.

THE GREAT TRANSITION

"Hello!" said I, "What's that?" And I stooped to pick it up.

"That?" replied the boy who happened to be passing through the school yard with me, "That is nothing but a lead pencil."

"But it is a whole one," said I, "and with a rubber on the end."

"I know it," said the boy.

"What? Do you mean to tell me that you have seen this here before?"

"Yes; everybody's seen it."

"All the children in your school have seen this lying here day after day, and not one boy has picked it up?"

"Of course. What should we pick it up for? There's plenty in the schoolhouse; the town buys 'em."

And I had been given a text for a long mediation. Not pick up a whole new lead pencil? And a pencil with a rubber on it!

When I was a boy we even prized slate pencils. A boy who hooked anybody's slate pencil was baited until he gave it up; but a lead pencil—we fought for lead pencils as the Greeks and Trojans fought for Helen. We scoured the country side for old horseshoes to sell to the blacksmith for money enough to buy a lead pencil. And having it, we cut our private mark on it, guarded it, kept it as our last resource in trade. Many a time a precious two inch lead pencil has turned an important jackknife trade one way or the other. I never had but one lead pencil at a time and often hardly that, until I was fifteen years old. And these ten-year-olds scorn to pick up a whole one with a rubber! Think of it! The best eraser I had was a piece of a rubber boot heel!

HENRY TURNER BAILEY in the *Journal of Education*.

"ADVERTISING began when the eager merchant went out on the street and jogged the pedestrian by the elbow to get his attention. This was wearisome work and sometimes the pedestrian hit back. Nowadays the merchant can jog a million men by the elbow through the public print, while he himself is beating a worried golf ball out of a sand pit."

GRAPHITE IN THE BOILER

Everyone knows that to some extent all waters used for feeding steam boilers contain impurities, either in suspension or in solution. Everyone knows, too, just what happens when the impurities collect on the boiler shell and tubes in the form of scale or soft mud, in sufficient quantities to affect the steaming properties or to even seriously imperil the safety of the boiler. The explosions about which we read so frequently are nearly always caused by the failure of a scale-clogged tube, or a scale-incrusted plate that has warped to the point of rupture, or to an unsuspected crack in the shell that had been concealed by scale.

The fight against scale has been stubbornly waged, but scale has been the victor in nearly every instance. All of the ordinary preventives, such as pre-heating the feed water, chemical treatment of the water both inside and outside of the boiler, filtration, and the introduction of zinc into boilers are, at best, only partly successful. Such remedies do not remove *all* the scale, while some of the chemical treatments really do more harm than good. A boiler is one of the worst possible places in which to carry on chemical reaction where it nearly always causes more or less corrosion of the metal.

The effect of scale in a boiler ordinarily is to reduce both its steam-generating capacity and its economy, since scale is not a good conductor of heat and therefore diminishes the transmission of heat through the boiler plates and tubes. Scale is also highly dangerous, for whenever it accumulates to any great extent at a part of the shell exposed to the flame or to very hot gases, it prevents the cooling action of the water from protecting the metal against burning. The plates frequently become overheated and weaken so as to "bag," crack and cause an explosion.

Since nothing has been found to absolutely prevent the formation of scale, the only logical thing is to employ some means to easily and safely remove the scale that does form. The answer is FINE FLAKE GRAPHITE. We have sold flake graphite for this purpose for many years and always with gratifying results.

The action of graphite is not chemical; it does not dissolve the scale, nor does it attack the metal, as is often the case with strong compounds; neither is it affected by any acids in the water or by the heat generated in the boiler. The particles of graphite simply work into the minute cracks existing in the old, hard scale and gradually penetrate between the scale and the metal. The scale thus loosened may be rapped off or removed otherwise without trouble. It must be understood that if the scale is very hard and thick it may require as long as three or four months for the graphite to loosen it, but once removed, scale can never adhere firmly to the metal again as long as the graphite treatment is continued. Graphite also becomes thoroughly intermixed with new scale as it forms, rendering it soft and crumbly. In short, graphite makes boiler cleaning positive and easy.

Its use—

- Minimizes the time and power lost while cleaning,
- Increases efficiency of heating surfaces,
- Reduces fuel consumption,
- Minimizes repairs,
- Improves operation of feed pumps and water meter,
- Prolongs the life of boilers.

The action of graphite is purely mechanical. It may be used in any feed water and in any type of boiler. It will not evaporate or dissolve. It can not cause "foaming," nor under normal conditions can it pass from the boiler with the steam and thereby render it unfit for industrial purposes. For this reason it finds special favor in ice plants, laundries, breweries, etc.

KIND OF GRAPHITE TO USE

We do not claim that all graphite would be a good thing in the boiler. Many forms of graphite carry large percentages of damaging impurities which, instead of loosening scale, actually aid in its formation. Some graphite, particularly the amorphous or powdered variety, often has a tendency to form into pasty or mud-like masses in the presence of water. This is one of the reasons why we always recommend the use of *very finely ground flake graphite of good quality*, although we can furnish amorphous graphite if it is desired.

Experience shows that flake graphite will be distributed more evenly on the surfaces of the shell and tubes and become more permanently attached to the metal, than the amorphous kind. (One of the characteristics which make flake graphite superior to amorphous for lubrication.) This means that the effect of flake graphite persists longer at each application, and consequently less of it is required to keep the boilers in good condition after the old scale has once been disintegrated and removed.

Dixon's Boiler Graphites have the reputation of the Dixon Company behind them.

The following grades offer considerable range in price. Naturally, best results may be expected from the best graphite.

DIXON BOILER GRAPHITES

Boiler Graphite No. 2 is the highest quality of finely ground flake graphite and is recommended where the very best results are sought.

Boiler Graphite No. 042 is amorphous or powdered and is entirely different from the flake variety. (See above.) No. 042 *must not* be used as a lubricant because amorphous graphite is unfit for the purpose.

Prices in various quantities will be furnished upon request.

FEEDING GRAPHITE

Graphite may be fed to boilers by any of the various means the engineer has for feeding other compounds. Perhaps the simplest and best method is to introduce it into the pump suction line. The graphite then passes through the pumps and heaters to the boilers. One of the advantages of this method is the improved operation of pumps and water meters, due to the lubrication furnished by the graphite.

Fig. 1 illustrates all the special apparatus necessary. Mix a pint of graphite in a pail of water and pour into the funnel while valve *A* is closed. Then open valve *A* and permit the mixture to be drawn into the pump. Close *A* as soon as all the water has left the funnel. In case the pump valves leak and do not readily draw the mixture from the funnel, partly close the valve on the main suction line until the mixture has disappeared.

Another suggestion is shown in Fig. 2. A piece of 4" pipe about 30" long is fitted with a water tight cap at one end and the other end connected to the suction pipe through a valve. The $\frac{1}{4}$ " pipe at the top should be connected with the pressure

side of the pump. To charge the chamber pour in some water, then the graphite, then more water, and screw on the cap. Then open the lower valve a little and just crack the upper one.

If the boilers are in a battery, care should be taken that each boiler receives its share of graphite.

No set rules can be given for the amount of graphite to use in a boiler, because this will depend upon local conditions such as the amount and nature of the scale forming material in the water. A little experimenting is necessary by the engineer in charge to determine the quantity of graphite that will produce the best results. There is no object in using more graphite than is needed.

Our many years experience in treating boiler scale sustains us in making the following general recommendations—

Feed about one pint (one-half pound) of graphite into each boiler each day of twelve hours. For every 100 H. P. above 250 H. P. an extra one-third pint of graphite should be used.

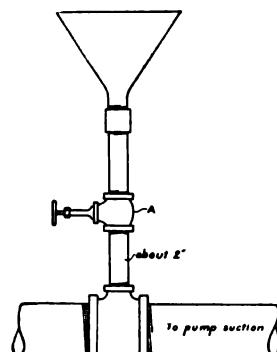


FIG. 1

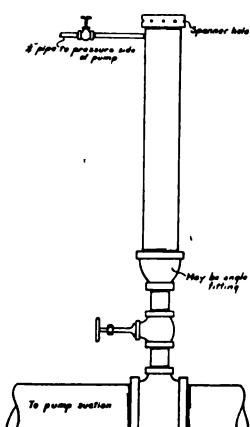


FIG. 2

After all the old scale has been removed, the daily injection of graphite may be decreased slightly. It is the continual introduction of a small amount of graphite that brings about satisfactory results.

In addition to the above, put about two quarts of graphite into a boiler each time after cleaning. The water will aid to distribute the graphite evenly over the heating surfaces. Boilers of more than 250 H. P. capacity require an extra pint of graphite for each additional 100 H. P.

Boiler graphite forms a thin, slippery film over the boiler linings, protecting them from the action of acids in the water and associates itself with the sediment which is formed, thus preventing the formation of hard scale and keeping the solid residue thrown down by the evaporation of the water in such a soft condition that it can be easily ejected from the boiler by the process of "blowing off." If the water is not blown off sufficiently often, this sediment forms in quantities large enough to necessitate cleaning the boilers. Any boiler using bad water should be blown off every twelve hours.

Dixon's Boiler Graphite breaks down some scale with surprising rapidity, and it is, therefore, important to open the boilers every week after beginning the use of graphite to prevent an accumulation of loosened scale on the plates. Such an accumulation may result in a badly damaged boiler. After the old scale has been entirely removed, boilers can be run for longer periods without danger.



Showing Bags Due to Sediment.
Boiler is Upside Down.

Many boilers that are supposed to be in good condition are in reality badly pitted. Dixon's Boiler Graphite will remove the scale and disclose the unsuspected pits so that means may be taken to prevent further corrosion.

Condensed exhaust should be passed through an efficient oil separator, before it is taken into a boiler. Oil in a boiler is particularly obnoxious, for its presence in any large quantity is almost sure to cause bagging. In this connection it is well to state that there need be scarcely any oil in exhaust steam if the engine cylinders are properly lubricated. Flake graphite is the ideal cylinder lubricant, oil being required only to distribute the flakes over the valves and walls. Half the oil ordinarily used is sufficient if supplemented with Dixon's Flake Lubricating Graphite. The advantages are: saving of oil; cleaner exhaust; better lubrication; no danger even if oil supply should fail for a considerable time. We will be glad to tell you how to feed graphite to cylinders if you will let us know the kind of lubricating system you are using.

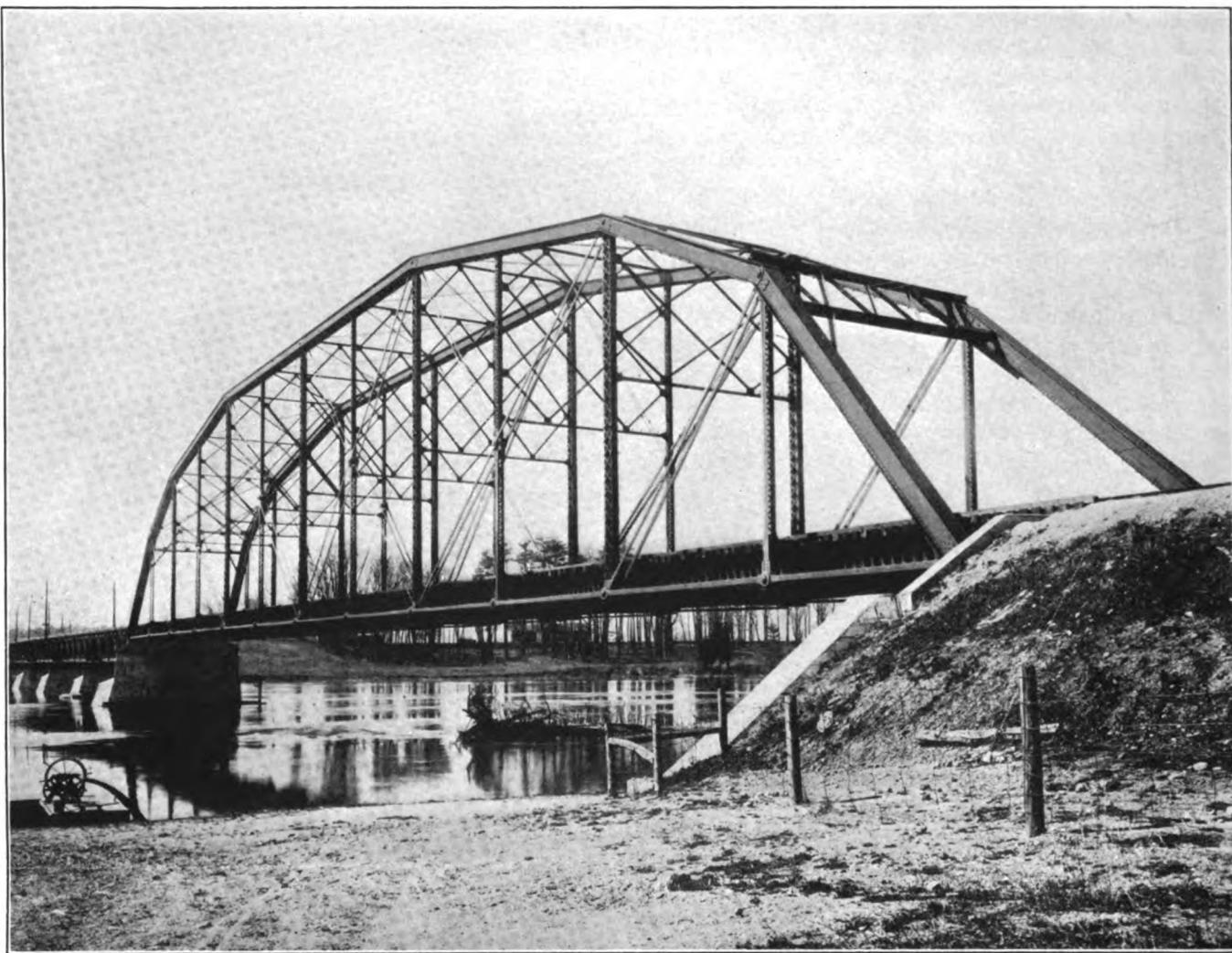
Paint boiler fronts, exposed portion of shell, smoke flues and stacks and all metal work about the plant with Dixon's Silica-Graphite Paint. It is the most durable paint on the market and is without an equal for protecting metal from all corrosive influences.

We have from time to time reproduced in GRAPHITE letters from users of Dixon's Boiler Graphite as evidence of its efficiency in the boiler room. These opinions, mostly from chief engineers, together with others on file at the Dixon office which will be reproduced in GRAPHITE, are included in an illustrated booklet, of neat appearance. If you wish to keep a brother engineer informed give him one of these booklets. Write for as many as you need of booklet No. 190-T and they will be forwarded to you promptly, free of cost.

MR. SAM MAYER, manager of the Dixon branch at Chicago, has for a number of years enjoyed the misdirected envelopes which have come to his office, in spite of the misdirection. Mr. Mayer says that he always gets them, no matter how they are directed. They may be addressed, "Joseph Dixon Crucible Company, U. S.," or "Joseph Dixon Crucified Company, Chicago," or any other way. The latest is, "Dam Mayer, Joseph Dixon Crucible Company, Chicago."

"NOWADAYS the live business man begins by hiring an advertising writer with the tongue of angels and a seductive way in paragraphs. Then he buys \$1,000,000 worth of advertising space, and, lastly, he decides what to sell."

A LITTLE truth goes a long way, if you stretch it.



**PHOENIX BRIDGE OF THE BEEBE
TROLLEY SYSTEM**

Phoenix is the emblem of immortality; to live and last forever is its significance. Hence, in the world of industry, does this name imply that which is permanent and durable.

Particularly impressive is this relationship of name and its meaning to Roadmaster W. A. Steckel of the Beebe System of Trolley Roads. After a recent inspection it was reported to Mr. Steckel that the Phoenix Bridge, for the protection of which he had specified Dixon's Silica-Graphite Paint several years ago, was as yet in no need of further attention.

The Phoenix Bridge, may it be explained, spans the Oswego River and Barge Canal and carries the trolley tracks of the Syracuse, Lake Shore and Northern Electric Railroad. The above illustration of the Phoenix Bridge was, through the courtesy of Mr. Steckel, first reproduced in the February 1911 issue of GRAPHITE, at which time it was stated that "Dixon's Silica-Graphite Paint has given excellent service on this structure and on several other bridges included in the same system."

How much longer the Phoenix Bridge will continue to be "worthy of its name" will probably depend upon what paint is used to protect it. Dixon's Silica-Graphite Paint will no doubt be selected to succeed itself when the time comes for repainting.

CUBIST TELLS WHY

"That is What is Done When There is Done," She Says

In order to converse intelligently nowadays you must know at least something about the cubists and the post-impressionists and the futurists. Naturally there are many sources of information, but the most authentic is that derived from the fountain head—the authorized description of the cult. It is obtainable in book form and is the product of the first cubist writer in the world, Gertrude Stein of Paris. This authority says:

"There is all there is when there has all there has where there is what there is. That is what is done when there is done what is done and the union is won and that division is the explicit visit."

Neatly put, is it not? Nothing like consulting a real authority. Here is some more, just as clear:

"There is that desire and there is no pleasure and the place is filling the one space that is placed where all the piling is not adjoining. There is not that distraction. A wall that is not stepped where the floor is covered is not the place where the room is entered. The whole one is the same. There is not any stone. There is the wide door that is narrow on the floor. There is all that place."

With this clear explanation of the new cult you can readily see why a picture of an explosion in a shingle mill is labeled, "Nude Descending a Staircase"—also, why the police censor will never have a word to say.—*Chicago Inter-Ocean*.



**PENNSYLVANIA RAILROAD WATER TANK AT
WATSONTOWN, PA.**

"If men could stick to the water tank as long as Dixon's Paint does, Gee! what a dry world this might be," declared a railroad inspector.

The inference reminds us of the way in which some paints are pledged to durability as often as a sale is sighted, and just so often do these paints fail to keep the pledge of the manufacturer.

The big railroads have experimented and found out that Dixon's Paint keeps its pledge of longer service and thus greater economy. All over the country, bridges, viaducts, steel cars, water tanks and other railroad property is protected with Dixon's Silica-Graphite Paint.

The water tank illustrated above was constructed for the Pennsylvania Railroad by the Des Moines Bridge and Iron Company of Pittsburgh, Pa., and is located at Watsontown, Pa. Its capacity is 50,000 gallons.

The paint barrel at the foot of the girder and ladder to the left in the illustration is suggestive of the protection this water tank has received from Dixon's Silica-Graphite Paint.

A MAN, like a cigar, is sooner or later pretty sure to meet his match.

REVISED DOWNWARD

The price of Dixon's Silica-Graphite Paint has been revised downward. Our ability to do this is owing to the lower cost of linseed oil. The price of Dixon's Silica-Graphite Paint must necessarily depend upon the price of linseed oil, as only the very best and purest boiled linseed oil is used in the making of Dixon's Silica-Graphite Paint.

The pigment, silica-graphite, is just as near the ideal pigment as we can get. Nature probably provides no better pigment. It is mined at the Dixon mines at Ticonderoga, New York, where the silica is associated with the graphite in a way that no mechanical mixture of silica and graphite could hope to imitate.

It has been demonstrated that Dixon's Silica-Graphite Paint will last twice as long on all kinds of metal surfaces as any other paint for protective purposes, and as the first cost is only about ten per cent higher than the highest grade of any other protective paint, it is readily seen how easily the economy of Dixon's Paint can be figured out.

Circulars and detailed information will be sent to anyone interested on request.

Please address our Paint Department.

DIXON'S graphite publications sent free upon request.



HOW SAMUEL ROSS OF PEORIA PUBLIC SCHOOLS MADE A LEAD PENCIL

By A. P. LAUGHLIN, Superintendent Manual Training

As a teacher of manual training it has been my practice to try in every way possible to stimulate an interest in industrial subjects, in inventors and labor saving devices, in the tools of the mechanic, in their history and possible improvement, to develop the reading and recording habit in connection with one's work, as well as the experimenting habit. For it is the combination of theory and practice, the inspiration of the example of others that makes strong, efficient workmen of us. To this end it has been my habit to assign various subjects to my classes that are suggested by their work and to offer an additional credit for study and research along the line suggested.

Two years ago I assigned the subject of the lead pencils to a class in drawing, and as this account shows it proved to be a good one to bring out the results suggested above. We did not at that time have the little "Geography of the Pencil" gotten out by the Dixon Company, but there were books that described the present and past methods of making pencils and the boys brought in a number of well written papers as the result of their research in the library.

One of the things that they learned was that graphite is often found under coal, and as we live in a coal mining district I offered a half credit to any boy who would find and bring us some graphite. One boy was successful. Two others brought specimens that were not found locally but were given to them by friends. Thus we were all enabled to see and handle graphite as it occurs in Nature. I then proposed that they try to make a pencil from raw materials collected by themselves, going direct to Nature and not depending upon others for anything. Several undertook to make such a pencil. I suggested that they refine their clay by stirring the same in water, allowing the heavier parts to settle, then pouring off the finer portions suspended in the water and, after allowing this finer clay to settle, pouring off the water and drying the clay. None of the boys were successful, however, in properly

refining their own clay by this method. Their leads were too brittle, they would not hold together. Their clay was not fine enough. However, one of the boys after repeated attempts with his own clay, gave up the struggle and purchased some fire clay. I am unable to find the paper he wrote describing his experiments but I can tell the more important incidents.

He did not, of course, know the proper proportions of clay and graphite for making a good 2-H pencil, but he started with a small portion of clay and a great deal of graphite. He mixed the two together thoroughly by hand, then, by means of a stick he forced the mixture through a small hole punched in the bottom of a baking powder can; placing the lead thus formed upon a brick he fired it in the house furnace. This first lead was "too soft and crumbly." (This was after he had purchased fire clay, those that he had made with the clay he had refined had all been "crumbly.") He then put in a large amount of clay and a very little graphite. This gave him a lead that was strong enough but very hard indeed, in fact, it would make almost no mark at all on paper. He then used a mixture about half clay and half graphite. I do not remember whether this pencil was a success or not, but at any rate he changed the proportions until he got a lead that corresponded very nearly to a 3-H pencil. The lead was not very straight, but he brought it to school and encased it in wood, fitting the groove of the casing to the contour of the lead, and I have one of the pencils in my office.

When I show it to people and ask them what they think of my pencil they do not understand what I mean. It looks and acts like any other pencil. They try it and give it back asking all sorts of questions. "What's the joke?" "Where did you steal it?" etc. When I tell them the history of that pencil, of how the boy made nine other unsuccessful attempts before he made that one, of how he got the graphite from a coal mine just south of town, and how he learned the method by reading books that he found in the library, they get very much interested. They listen to the story with marked attention. But their interest is as nothing to the interest of the class that looked up the subject and heard Samuel Ross read his paper telling just how he made that pencil. The boys in that class could all answer the questions I had asked in the beginning, *e. g.*, What is a "pressed" lead pencil? What does 4-H mean? Do they press the lead harder to make hard pencils or do they make them hard some other way? Who make pencils in this country? Is there anything other than graphite in the lead? All of these and many more they could answer.

Since that time we have asked all the men who wanted to sell us pencils to tell us how they were made. Mr. H. M. Johnson, of the Dixon Company, is the only man that I have seen who knew. He did know and he sent us some splendid literature on the subject. The boys were especially interested in the story of Joseph Dixon and his inventions. We do not, of course, advertise any one make of pencils in our schools, but we do honor our inventors and we were glad to be helped out in our study by the company formed by one of our great inventors.

THE greatest study of mankind is man, but the most popular is woman.



SIGNAL PIPES, BOSTON TERMINAL STATION

To signal engineers, the "pipes of peace" are signal pipes painted with Dixon's Silica-Graphite Paint. In peace of mind it is worth much to the man in the tower to know that the pipes under his operation are satisfactorily protected against the sun, rain and wind driven dust of summer as well as the ice and sleet of winter, the brine drippings from refrigerator cars, sand, abrasion, gases, acids and the terrific wind-driven blasts of cinders and other active enemies of the signal apparatus. With Dixon's Silica-Graphite Paint upon the signal pipes he is assured of positive control.

In the above illustration appears one of the large signal towers and its accompanying array of signal pipes, located near the Boston Terminal Station, Boston, Mass. On the platform in the background may be seen two individuals, presumably the painter and a railroad inspector, glancing with approval at the appearance of Dixon's Silica-Graphite Paint upon the signal pipes before them.

GERMAN PENCIL MAKERS

Are Hoping That the United States Will Let Down the Tariff Bars

The German lead pencil manufacturers have for years complained about the depression of the Nurnberg pencil industry. They have sought to have the German government in its treaties secure a reduction of the tariffs which exist in the United States and other countries, especially the higher tariff which exists in the United States.

The German pencil manufacturers, furthermore, have demanded from their own country greater protection against Austrian pencil makers, claiming that labor in Austria is less than in Germany and that they, the Germans, are not able to successfully compete against the Austrians.

The largest and most extensive pencil manufacturers in the world are located in Nurnberg. They have been established there for over a hundred years. There are also established in Nurnberg manufacturers who make a specialty of improved and intricate and up-to-date pencil machinery. American pencil manufacturers as well as other pencil manufacturers throughout the world, go to Germany for much of their pencil

machinery, on which there is a duty of forty-five per cent to be paid.

German pencil manufacturers have easy access to suitable pencil wood, graphite and to all of the other materials used in the manufacture of lead pencils, especially in the way of a fine clay which is used as a binder for the graphite and which is found nowhere in the United States.

This all being so, and we do not know that it is disputed, how will it be possible for the lead pencil manufacturer in America to successfully compete when he pays four times the cost of labor that Germany does and when it is considered that labor alone is seventy per cent to eighty per cent of the cost of a lead pencil.

The inquiry which Mr. Redfield, Secretary of Commerce, has directed in the broad question of production in the pottery industries of the United States, might well be extended into the cost of labor in other industries and we trust that it will be.

Men who slash the tariff would do well to look to it that they do not slash into the very life of American labor.

The plea has been made by representatives of American manufacturers that it will be impossible for them to compete with foreign producers in the same line without a reduction of wages, and they have offered to submit their own books to sustain this claim. The Dixon Company is willing to submit their books and the offer has been made to the Committee of Ways and Means by the president of the Dixon Company, and also by the officers of other pencil companies.

It is not a matter of "stimulation of the wits and energies of the American manufacturers"—it is a matter of actual wages paid.

PEOPLE DO READ ADVERTISEMENTS

That people do read advertisements even though they make no response, is evidenced through a printer's error wherein the price of the R-C-H Automobile was set up as \$9.00 instead of \$900.00.

The first day nearly 100 letters were received in which were enclosed checks, drafts and post office and express money orders for \$9.00, with the request that the car be shipped at once. This continued for weeks. From every point of the compass came a flood of telegrams and letters as well as long distance telephone calls from friends of the company and the car; many showing their good will by anxiously informing the officials of the mistake; others combining their friendly notification with gentle "joshing."

The anxious bargain hunters were assured that on several occasions the courts have ruled that such a ridiculous and patent mistake was in no way binding on the advertiser. Friends were thanked for their interest and the incident was closed.

The return from that single mistake was an important object lesson for the R-C-H Corporation as to the value of advertising.

A PAINT JOKE

"The steel work at the Polo Grounds needs protection," remarked the nervous visitor.

"Yes," agreed the home rooter, "the Giants are pilferin' more bases than ever this year."

DIXON PRODUCTS HELP THE "MOVIES"

The many graphite products manufactured by the Dixon Company occupy wide fields in the industrial and even artistic worlds. Here is a new testimonial from one of the leading motion picture concerns. The Carlton Motion Picture Company, producers of "Reliance" films, show that in the hard work that makes possible their popular pictures of instruction and entertainment, Dixon products perform an important part; that is, Dixon's Silica-Graphite Paint has economically protected the roof of their moving picture theatre, at City Island, N. Y. Dixon's Graphite Lubricants smooth the bearings of the picture projecting machine which catches the actors instantaneously at the work, and Dixon's Pencils are used by the scenario editor, Mr. Hopkins Hadley, in writing the plays. The letter tells the story better than we can.

CARLTON MOTION PICTURE LABORATORIES

"RELIANCE" MOTION PICTURES

Studio, 540 West 21st Street, New York City.
Factory, West 20th Street and Neptune Avenue,
Coney Island, N. Y.

April 30, 1913.

*Joseph Dixon, Crucible Company,
Jersey City, N. J.*

GENTLEMEN:—Not long ago a peculiar accident happened in a Southern town. A man was found dead in a small woods near his farm. He had a bullet in his brain and had evidently been chopping down trees shortly before his death. A thorough investigation revealed the strange fact that he was killed by a bullet dislodged from the trunk of a tree he was felling with a small charge of dynamite. And stranger still, that the bullet had originally been fired at him from the rifle of a man he had wronged and had remained in the tree for five years before finding its mark. Around this incident was written the two-reel picture drama produced by the Reliance Company called "The Vengeance of Heaven," the author having read it in a daily paper. A great many pictures originate in this manner, the only danger being that several writers are apt to use the same idea. In fact it is the rule rather than the exception for a scenario editor to receive a number of photoplays at the same time on any interesting incident that appears in the columns of the newspapers.

The Joseph Dixon Crucible Company had a hand in the making of the story mentioned above, as it was written with Dixon's Cabinet Pencil No. 2. All "Reliance" photoplays are arranged into scenes with Dixon pencils, as we find that they improve the dispositions of the artistic temperamentalists who do the work.

It might also be interesting to know that the roof of my moving picture theatre on City Island, N. Y., is protected from the elements by Dixon's Silica-Graphite Paint and I refuse to worry about it for at least five years. The same building contains a moving picture projecting machine which has done excellent service for three years with its bearings running smoothly on Dixon's Graphite.

With best wishes from the "Movies,"

Yours very truly,

(Signed) HOPKINS HADLEY.

DIXON'S graphite publications sent free upon request.



"Talk about hard work," sighed Old Jerry as he sat watching a squeaking and groaning mass of clothes lines, "the reverse lever in Old 689 used to put a crick in my back every time I pulled it.

"That's before I got wise to usin' Flake Graphite. Flake Graphite, and here I mean the Dixon kind of course, is the only thing I ever knew to satisfy both the boys and the road. It makes an easier and better day's work for the man in the cab with less worry and no tired-out feeling to greet the folks at home.

"And I just wish I had the money that the road saves in oil and coal bills each year. It's enough to start a club for the boys on the retired list who started the savin' by writing for booklet and sample No. 190-C."

Joseph Dixon Crucible Co.

Established 1827

JERSEY CITY, N. J.

GRAPHITE



VOL. XV.

JULY, 1913.

No. 7.

Issued in the interest of Dixon's Graphite Productions, and for the purpose of establishing a better understanding in regard to the different forms of Graphite and their respective uses.

NERVE

Years ago we picked up a circular advocating the use of a certain concern's graphite for paint purposes. The circular fully described the usefulness of graphite as a pigment and gave testimonials, which testimonials would seem to indicate that it was that concern's graphite which had been used. One day, in talking with an officer of the concern, we asked him why he had made use of our printed matter in that way, to which he replied: "Why, gentlemen, where else would I look for information save in the Dixon literature, there is not anything about graphite that I know of that you have not written, and we thought it was a compliment to the Dixon Company."

It is quite evident that as the years have rolled on, the same concern is as much at a loss for original testimonials as ever. In a new catalogue just issued, special pains are taken to knock flake graphite in favor of the concern's amorphous graphite. As evidence of the superiority of amorphous graphite for lubricating purposes over the flake product, it says:

"The *Scientific American* also recognizes the great value of finely pulverized (powdered) graphite as a lubricant under high temperatures. The lubrication of gas engines has been a somewhat difficult problem on account of the high cylinder temperature that follows the explosion. Not long ago the cylinder of a gas engine used by the Pennsylvania Railroad Company in pumping water became badly scored, owing to the fact that the lubricator was allowed to become dry by the attendant. It was feared that the condition of the engine would require reboring its cylinder, but upon regularly injecting for a week or so, some finely pulverized graphite through the suction pipe, the engine was found to run smoothly."

—*Scientific American Supplement*, June 30, 1898.

This was fifteen years ago, but the Dixon Company has a habit of keeping its old time literature, and in a little pamphlet published in that year, 1898, there will be found the self-same testimonial which was sent to us by an official of the Pennsylvania Railroad Company from Sharon, Pa., and after making use of this testimonial in our printed matter, we sent it out in the form of a reading notice for the various papers in which we carried advertisements, and the *Scientific*

American was kind enough, it appears, to make use of this testimonial.

The graphite used was Dixon's Finely Pulverized Flake Graphite. The official fed the graphite as indicated and wrote us further that the use of this graphite had saved the Pennsylvania Railroad Company about \$75, as he had not been obliged to discontinue the use of the engine in order to have its cylinder rebored.

We do not especially mind our would-be competitors making use of the Dixon literature, but we should like to have them give us credit. Sometimes it looks to us as though they were not able to get good testimonials on their own product.

THE RUBBER MARKET

The market of the United States is by far larger than the rest of the world combined, and the production of automobiles in this country far exceeds the total production in all foreign countries of the world. Tire manufacturers and automobile manufacturers in other countries have long since reached the stage of over-production and the manufacturers of rubber in the United States have requested that the tariff on manufacturers of rubber goods should not be reduced below twenty-five per cent *ad valorem*, for the reason that the wages paid in the United States to rubber workmen average \$18 per week, and many of the better workmen average \$24 per week. In England the average wage of workmen of India rubber, Gutta-Percha, etc., is twenty-six shillings and nine pence, or \$6.50.

With this difference in labor, tires made in England, France, Germany, Italy or Russia can easily pay ten per cent duty and undersell American manufacturers. The American manufacturers of rubber claim that the lowering of the duty to ten per cent will work a benefit to foreign manufacturers and a corresponding injury to American manufacturers and American labor, with the one exception of the B. F. Goodrich Company of Akron, having a capital of \$90,000,000, and the largest manufacturer of tires in the world, which company, through its French factory, will be able to manufacture there and import into this country.

On this point the American manufacturers quote the report of the Ohio "Senate Select Committee" where in the testimony of Mr. Shaw, vice president of the B. F. Goodrich Company, is quoted to the effect that a "reduction of ten or fifteen per cent might be made in the tariff, but if you make a larger reduction" the Goodrich Company could with its "Paris plant beat the Akron manufacturers off the face of the earth."

ESTABLISHED 1827



INCORPORATED 1868

**JOSEPH DIXON CRUCIBLE CO.**

JERSEY CITY, N. J., U. S. A.

**Miners, Importers and Manufacturers of Graphite,
Plumbago, Black Lead.**

OFFICERS:*President*—GEORGE T. SMITH*Vice President*—GEORGE E. LONG*Secretary*—HARRY DAILEY*Treasurer*—J. H. SCHERMERHORN*Ass't Sec'y & Ass't Treas.*—ALBERT NORRIS**DIRECTORS:**

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EDWARD L. YOUNG

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J. H. SCHERMERHORN

OFFICES AND SALESROOMS:

NEW YORK SALESROOM, 68 Reade Street.

PHILADELPHIA SALESROOM, 1020 Arch Street.

SAN FRANCISCO SALESROOM, 155 Second Street.

CHICAGO OFFICE, 1324 Monadnock Block.

BOSTON OFFICE, 347 John Hancock Building.

PITTSBURGH OFFICE, Wabash Terminal Building.

ST. LOUIS OFFICE, 501 Victoria Building.

BALTIMORE OFFICE, 1005 Union Trust Building.

BUFFALO OFFICE, 72 Erie County Savings Bank Building.

ATLANTA OFFICE, Fourth National Bank Building.

EUROPEAN AGENTS,

Graphite Products, Ltd., 218-220 Queen's Road, Battersea, London.

LUBRICATION FOR GAS ENGINE CYLINDERS

In the May 1913 issue of *Gas Power*, Mr. A. L. Brennan, Jr., under the subject of "Why Lubrication," says the following in regard to graphite:

"Graphite is especially adapted to gas engine cylinder lubrication, for its nature readily withstands the highest temperatures without undergoing any change, good results having been had from various proportions held in solution in cylinder oil."

The Dixon Company manufactures a special grade of flake graphite, known to the trade as Motor Graphite, for gas engine cylinder lubrication. This may be introduced with the oil by putting it right into the crank case in the proportion of a teaspoonful to a quart of lubricating oil, and in a little while

the metal surfaces will be covered with a thin, tough, veneer-like coating of marvelous smoothness, giving much better compression and a smoother running engine.

Motorists tell us that the smoke nuisance is entirely obviated when Dixon's Motor Graphite is used as indicated above. Automobile racers use it regularly and are entirely free from engine trouble due to lubrication, and also tell us that the speed of the car is very materially increased.

GRAPHITE TO "RESTORE" COMPRESSION

Loss of compression, which usually comes of worn cylinders and pistons or rings, sometimes can be corrected without resorting to regrinding the cylinders and fitting new pistons. The cure is very simple and embraces nothing more than a change of lubricant from the ordinary cylinder oil to a graphite lubricant. The graphite is deposited on the cylinder walls and held there when the oil burns off, leaving the surface perfectly polished and formed to the shape of the piston. It is well when using graphite as a lubricant to file off the sharp edges both on top and bottom of the piston rings, which otherwise would tend to scrape the walls of the cylinders free of the graphite.—*Motor World*.

Through carelessness the driver of a Franklin car badly scored two of the engine cylinders. Greatly disturbed over the matter, the owner asked a mechanical friend if the cylinders could be rebored. "Not necessary," said the friend, "just get some of Dixon's Motor Graphite, mix it with oil to a thin paste and poke it in through the spark plug holes. She'll smoke like _____ for a time, and maybe you will have to clean the plugs once or twice, but the graphite will cure the scoring absolutely and the oil will burn off."

The result was better than expected, as the compression in the two scored cylinders was better than in the others, showing how fully all uneven places had been filled. The effect was also a permanent one.

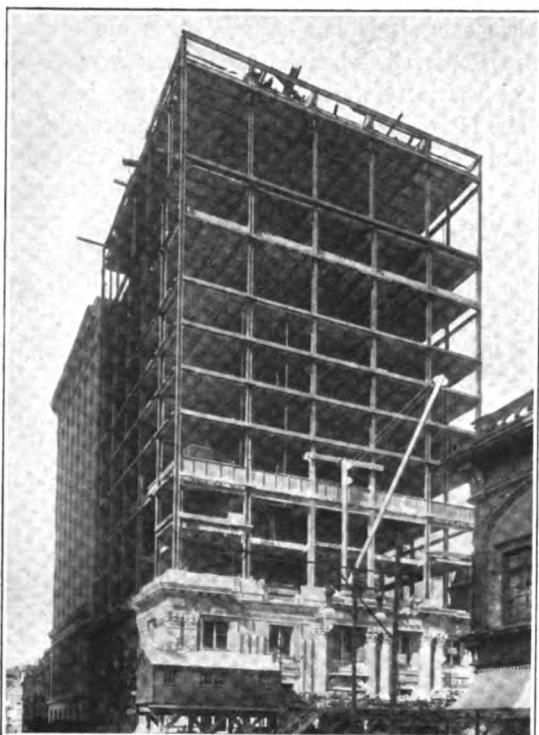
Automobile drivers who know the value of Dixon's Motor Graphite increase the compression and power of their engines by similar treatment.

HOUSE ORGANS

Mr. C. R. Lippmann says in *Printers' Ink*, "If we accept the logical conclusion and definition that the house organ is the voice, the organ, of the house publishing it, the question arises, 'Is a house organ, publishing also the announcements of other firms, still a house organ in essence, or is it rather a publication, hybrid sheet whose standing is rather uncomfortable—as the position of the 'straddler' is bound to be?'

The Dixon Company has published GRAPHITE since 1898. It has been asked to carry advertisements of machinery or of goods akin to but not conflicting with the Dixon products. The policy of the Dixon Company, however, has been to use GRAPHITE entirely as a medium for conveying a better knowledge of graphite and graphite products to those who should know more about graphite and its usefulness.

Because of this policy the Dixon Company has thought it wise to refuse all advertising, and furthermore, to confine Dixon's own advertising entirely to publications outside of house organs.



**MANUFACTURERS' CLUB BUILDING,
PHILADELPHIA, PA.**

Philadelphia justly boasts of many fine buildings. Among the few, however, which are entitled to a position in the front rank, will be the new Manufacturers' Club Building. In fact this building, when completed, will be, it is claimed, one of the most handsome and most imposing structures of its kind in the world.

Plans and specifications for the Manufacturers' Club Building were prepared by Messrs. Simon & Bassett of Philadelphia. The exterior is of Green River limestone, which in time will look like white marble. The entire ten stories will be used exclusively for club purposes. In addition to billiard rooms, lounging rooms, library and bed rooms for both resident and non-resident members, an entire floor has been set aside for the offices and headquarters of trade organizations. A large and elaborate banquet hall will occupy the eighth floor, while the main dining room of the club will be located on the tenth floor and constructed so that in the summer it may be opened into a roof garden.

The Manufacturers' Club Building is of fireproof construction throughout. A shop coat of Dixon's Silica-Graphite Paint, Natural Color, and a field coat of Dixon's Olive Green Color, were applied to the 2,000 tons of structural steel work by the American Bridge Company, Iron Contractors. Messrs. Irwin & Leighton are the General Contractors.

Do you specify Dixon's Silica-Graphite Paint to protect your steel work, and thus obtain best results? We make only *one quality*—the best, and it is the only silica-graphite paint where the manufacturer is able to use Nature's incomparable mixture of the graphite and silica. The pigment being practically inert, no chemical reaction sets in, and being finely ground it forms a film which holds tight to the steel.

"TOTE your own load and cut out your grouch," is a good way of putting into English a Japanese saying.

TETZLAFF DISCUSSES LUBRICATION

Some of the Reasons Which Impelled Him to Select Dixon's Graphite

Teddy Tetzlaff, holder of the world's road racing record, has made a somewhat extensive study of automobile lubrication, testing one make of oil after another in the various bearings of his car, and watching the effect upon the machine, its speed, etc. He has adopted the line of graphite greases made by the Joseph Dixon Crucible Company, Jersey City, N. J., and some of his reasons for this action are set forth by him as follows:

The most essential thing in the successful operation of an automobile is proper lubrication, and the lack of knowledge upon this subject displayed by the average car owner and driver is astonishing. You cannot run your machine without lubricant, but the difference between oil and oil, and grease and grease, is not understood by every owner. Different makes of cars require different kinds of greases; different parts of the same car require different greases. The owner does not know this because he has never gone to the trouble to post himself on the subject.

The average car owner believes that his gears and bearings are smooth. But if he will look at them under a powerful microscope he will see that these so-called smooth bearings look very much like a nutmeg grater, showing little pin points sticking up in the metal, tool marks and other abrasions. These little pin points lock and interlock, producing when the bearing surfaces slide over one another, what is called friction. When you realize that at least twenty per cent. of the power generated in your engine is lost because of friction before it is delivered to the rear wheels, you will understand the importance of using lubricants which will cut down this friction as much as possible.

Oil or grease is supposed to keep these bearing surfaces sufficiently apart so that these irregularities cannot interlock. Under normal conditions it does this to some extent, but when the heavy pull comes with the car in operation, the oil or grease squeezes out from between the working parts and we have little or no lubricant left when we need it most. But if there is a little flake graphite mixed with the oil or grease, it first fills up the pores and irregularities in the bearing surfaces and buries the pin points under a veneer-like surface of remarkable smoothness and endurance.

At one time I experimented for five days with various greases in my transmission and wheel bearings, but found that my gearbox heated up with all of them. When I substituted Dixon Graphite Grease No. 677, my bearings ran cool and all trouble was eliminated. At another time I made a comparative test on the one-mile motordrome at Los Angeles, being accurately timed by three stop watches. By an application of Dixon's Graphite I was enabled to increase my speed one second a mile at ninety miles an hour, which proved to me that graphite brought the friction down to a minimum.

—*The Automobile Journal.*

WE HAVE HAD innumerable examples of "the meanest man," and it now comes to us that the meanest old maid evened it up by placing three boiled eggs under an old hen that wanted to set.

C. I. F. VS. F. O. B.

Advantages of the C. I. F. Quotation

Mr. A. M. Fisher, at a luncheon of the American Manufacturers Export Association, pointed out to the members present what he believed were the advantages of the C. I. F. quotation over the old time practice of an F. O. B. price.

Owing to the many years experience of Mr. Fisher as a manufacturer, exporter and traveling salesman in foreign markets, he would seem to be able to speak as one having authority. He said:

"The C. I. F. quotation is advantageous and desirable because it is more efficient than the usual quotation F. O. B. shipping point. There are several reasons.

"It is well to understand the difference between the C. I. F. price and the F. O. B. price, and also to understand the differences as to risk. A C. I. F. price quoted for a foreign port, includes the cost of the goods F. O. B. steamer, the marine insurance charges, and the steamer transportation charges to the foreign port in accordance with the terms of the bill of lading.

"An F. O. B. price is understood to be a price at point of sale unless stipulated otherwise. By stipulation it may of course be effective at any point nominated.

"C. I. F. London and F. O. B. London are two different things, so far as risk is concerned. The F. O. B. quotation, as a rule, includes all of the risks of the C. I. F. quotation and in addition covers all the risks. A quotation F. O. B. New York as opposed to a quotation C. I. F. London, on a shipment destined to London will, as a rule, in practice, involve more risk than the C. I. F. quotation.

"With the C. I. F. price no liability is involved beyond the cost of the goods and the prepayment of the insurance and freight charges. These prepayments are not mandatory, however, if the amounts are allowed to be deducted. With the C. I. F. quotation damage or loss after shipment does not accrue in any way against the shipper, save on proof of negligence which, of course, is not avoided.

"With the F. O. B. price all liabilities are with the shipper until delivery is made in accordance with the quotation stipulation. If the stipulation covers delivery at a foreign port the risk is considerable. If it covers delivery at point of shipment it practically amounts to the same thing as a C. I. F. price, in view of the usual practice of the steamship companies and insurance companies to require prepayment of charges."

After explaining to the members the matter in greater detail, Mr. Fisher added that he had been to great pains to investigate the attitude of the foreign buyer, and also of the consular staff representing the commercial interests of this country.

He also quoted the statements of some who had expressed themselves, showing that the C. I. F. was largely preferred by foreign buyers to the F. O. B. method, and he believed that a general movement in the direction of C. I. F. prices would enhance the volume of foreign trade from this country.

THE CHANCE A NEW ARTICLE HAS

Mr. Bert M. Moses tells us in *Printers' Ink* that "the man who comes along today with a new article and representing a new company in the drug trade, will not find such a tumultu-

ous welcome awaiting him as was given our great citizen, Theodore Roosevelt, when he came back from Africa. He will meet the same answer that was given ten years ago, which Mr. Moses has not forgotten. The druggist will say: 'Go ahead and create your demand and I will supply it.'"

Such a reply comes from those other than druggists and it may be that it carries with it no offence. It may simply mean that the druggist has all of the cough mixtures and headache cures that he thinks the public will require, and certainly as many as he, the druggist, desires to carry in stock, and it is up to the new headache cure man to make the demand.

So it may be equally true with the stationer who hesitates to add to his stock any new lead pencil which the Dixon Company, or any other pencil company, may wish to promote and which the pencil company may think the public should have.

In other words, it does not seem to be out of the way for the trade to tell the manufacturer that it is up to him to create the demand for that particular article. Otherwise it will be a dead stock to the dealer, and the dealer does not intend to be a "eleemosynary institution" for any manufacturer.

"WHEN IS A TWIN NOT A TWIN"

All known birth records have been beaten by the wife of a workman at Barrow, Lancashire, who gave birth to a son and six weeks later to a baby sister. The doctors insist that from a medical point of view the children are twins, but the insurance commissioners insist that they are not twins, and are trying to solve the problem. The father, under the insurance act, is entitled to the maternity benefit of \$7.50. If the children are not adjudged to be twins, he will be entitled to receive another \$7.50, but if they are twins the act counts them as one.

Fine
Office
Pencils

DIXON'S Pencils make firm, clean, legible marks, on smooth paper or rough—and the lead is sturdy and lasting. It sharpens easily and writes black, but it never smuts nor smudges.

Send for Dixon Pencil Guide— gratis

JOSEPH DIXON
CRUCIBLE COMPANY
Jersey City, N. J.

A FISHING POOL

In Which Many a Fish Big and Little Was Caught

The *New York Herald* tells us that some fine fishing material went begging lately at an auction sale in the offices occupied by Julian Hawthorne, author of "Fortune's Fool," when he was in the mining business at No. 334 Fifth Avenue, N. Y.

Among the fishing equipment were 265,000 names of persons to whom circulars had been sent, commanding to their notice the wonderful gold mines which the Hawthorne companies had in Canada. If there had not been so many responses to the tempting bait perhaps Mr. Hawthorne would not now be down in Atlanta in the federal prison on account of certain charges concerning his indiscreet use of the United States mails. If anyone would like to try the same game over again, he will find some excellent names of those who may have slipped off the hook, and it cost \$50,000 to collect these names.

There is also a fine English list made up by a firm dealing in names for mining company literature, which cost \$2,500 and may be had for a "two-pun" note.

At the auction there were many who were interested in looking at the gold ore specimens and much curiosity shown and wonderment as to whether the nuggets were the real thing or whether they had been salted.

Mr. Albert Freeman, whose name appeared on the door, was not present at the sale. He was in a cool place down in Center Street. The place was like ashes of grandeur. One of the show pieces of the collection was Mr. Hawthorne's big desk with a map of the United States and Canada all over the top.

As soon as some one gave an especially large order for shares the author would be able to know at once the exact location of the town where the people were rising to the bait. The desk brought \$42.00 in real money. The office had undoubtedly once been a hive of industry. There were desks for about forty clerks and typewriters, and the pay roll must have been at least \$1,000 a week in the halcyon days, when the card index was being worked to capacity, and the checks were being hauled in hand over hand.

AMERICAN MANUFACTURERS EXPORT ASSOCIATION

The American Manufacturers Export Association, organized in 1911, occupies an unique field—international in scope. It obtains for its members exclusive advantages in placing their products in the markets of the world. It is co-operative in its nature, formed to obtain the best mutual service.

The association is arranging for the establishment of bureaus in New York, New Orleans, San Francisco and other large American ports. The names and addresses, business and connection of arriving buyers of American goods will thus be obtained and with no loss of time be in the possession of its members.

A regular weekly bulletin letter service containing exclusive information relating to export business and conditions, is mailed from the New York office in time to be on the desk of every member Monday morning. This feature alone has been found by members of the Association to be worth far more than the yearly cost of membership.

Membership in the Association, which is made up of firms or corporations of the very highest standard, is \$50.00 annually. In view of the fact that the Association is co-operative in result—each member being kept in intimate connection with every foreign field—the benefits are entirely out of proportion to the cost.

The above is published at the request of the Association, of which the Dixon Company are members. The Association has asked to obtain new members in order to enhance its usefulness and strength. The standing of the association's officers and directors is such as to qualify them to carry out their plans successfully; they personally have visited every country in the world and are familiar with markets and business conditions. Hon. William C. Redfield, Secretary of Commerce of the United States, is an active member and until recently was president of the association. Mr. E. V. Douglass, 66 Broadway, is secretary and is the one that should be addressed for further information.

INTEREST

The Kind That Works for You or Against You

Henry Ward Beecher, the famous Brooklyn preacher, once said in a sermon that interest was very much like fire—either a master or a servant.

If you were fortunate enough to have interest working for you, then each morning when you arose to begin a new day, you were just so much richer than you were the night before; but if interest was working against you, then each morning you will find yourself so much poorer.

We know that at four per cent, interest when compounded, more than doubles itself in eighteen years. At five per cent it will do it in fifteen years, and at six per cent in twelve years.

Have you ever thought of how important a part interest plays in the accumulation of wealth?

Combined with frugality and sound investment, compound interest is the foundation upon which the majority of fortunes are built. It is a silent but incessant worker, whether it works for you or against you.

Some men have done well in buying real estate, but the man who buys unimproved real estate and is obliged to pay taxes, and is obliged to charge interest up against the investment, may often find that the longer the money is tied up the heavier these charges become, and that it might have been much better to have put the same amount of money in good bonds at four or five or six per cent.

All in all it is hard to beat a good investment where money is well secured, where the interest is paid promptly every six months and where there is no occasion for worry or anxiety.

A good investment inspires confidence. It does not take a man's mind off his business, which generally needs his best and undivided attention.

The man who is tempted to buy mining, oil and rubber stocks, real estate, certain industrial stocks, etc., of uncertain value or involving great risk, would do well to keep in mind that the only means by which he can count on doubling his money is through the incessant workings of compound interest.

DIXON'S FLAKE GRAPHITE is what puts the ease in grease.

NUMBER THIRTEEN POPULAR WITH ARCHITECTS AND OWNERS

The report of the Superintendent of the Bureau of Buildings of New York City, Mr. Rudolph Miller, reveals the interesting fact that the average height of New York's 120,000 buildings is thirteen stories; and also that there are more thirteen story buildings than of any other height, this height being judged to give the best average in meeting taxes, running expenses of elevators, interest on investment, and possible rents.

In London, England, and on the continent, thirteen stories have also been found to be about the most paying and desirable height; in fact, many European cities legislate against a greater height. There are 389 thirteen story buildings in New York City; the next most popular heights in their order being twelve, eleven and ten stories.

New York has one building each of fifty-five, forty-five, forty-one and thirty-eight stories. On many of these buildings, both the largest and the popular thirteen story buildings, Dixon's Silica-Graphite Paint has been specified and used for the shop and field coats of the steel work. It is the paint that *lasts longer*, and has the most reliable and oldest manufactory back of it; the same house for fifty years. It is also a paint liked by the painter, as it spreads with just enough facility. It is the unrivalled economy paint, being Nature's mixture of silica and graphite, which we alone mine at Ticonderoga, N. Y. This makes the best pigment for the protection of steel and that is why the leading architects are firm in specifying it. They can always rely on just the *one quality*, the best. We make only one grade.

We especially invite correspondence with architects whose known desire is to best serve the owners of buildings. We can substantially assist with valuable paint experience.

RAILROAD CREDITS

The following are the boiled down abstracts of the *Railway Business Association's Bulletin No. 13*, entitled, "Shippers and the Advance in Freight Rates."

1. Something the matter with railway credit. Drop in railroads' new securities, issued in 1912, to lowest of the decade, while other corporations issued their highest. More railroad notes than stocks and bonds combined.
2. Facilities lagging behind traffic. Big car shortage in fall of 1912 in spite of mild weather.
3. Shippers and press evidently willing to consider the proposed Eastern freight rate advance without prejudice.
4. Shippers and railroads can aid the Interstate Commerce Commission by endeavoring to reach agreements as to rate schedules.

The bulletin itself is well worth reading by every business man and by every one interested in the welfare of transportation and business.

The bulletin places before the public the real facts and a copy of the bulletin may be obtained by addressing the secretary of the association, Frank W. Noxon, 30 Church Street, New York.

IF YOU WILL ride on the water or the grape juice wagon, see that the axles are properly greased with Dixon's Graphite Axle Grease, else you may be compelled to get down.

THE PANAMA CANAL

At a late luncheon of the American Manufacturers Export Association, Honorable John Barrett, Director General of the Pan-American Union, in his talk to the members dwelt particularly upon the subject of trade relations existing between Latin-America and the United States. Commenting on the effect of the opening of the Panama Canal on South American export and import business, he said:

"Those who are looking for an immediate and miraculous expansion of this business are doomed to disappointment, in my opinion. The opening of the canal will not transform business here at once and make everybody busy. But it is safe to predict that, in time, the same great results will follow that arose from the building of the transcontinental railroads in this country. The business of the west coast of South America, which now amounts to some \$700,000,000 annually, which goes mostly to Europe because of the shipping facilities afforded by the Straits of Magellan, will be turned in this direction. It will mean new life to the countries along the Caribbean Sea and the Gulf of Mexico, and, consequently, more business from them."

"The sanitary methods of the United States engineers in Panama are being copied in other countries in the tropics. The result is the turning into habitable lands of places that have heretofore been the seat of disease and death. It all means additional markets for American products. It behooves the live exporter to study his field in Latin America more now than ever before."

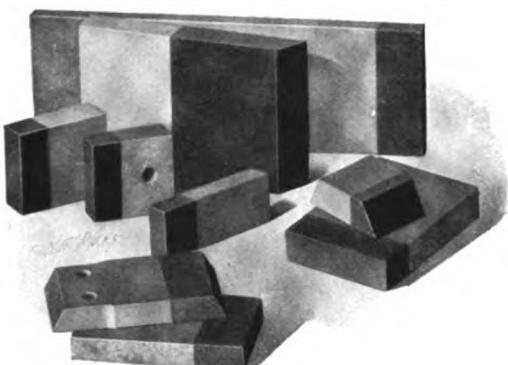
NOISY TRANSMISSION

(1531)—I have a car fitted with a planetary transmission which has been in service some time. The transmission is very noisy on the low speed and reverse, but quiet on the high. What can be done to quiet the noise? Can I use a certain grade of oil or grease or is there some preparation made for this kind of transmission? Is the noise due to the parts being worn out and would fitting new ones stop it? I am told that planetary transmissions are always noisy. Is this correct?

—SUBSCRIBER.

From the description it would appear that the noise is largely due to the gears being worn. The transmission is quiet on the high speed because no gears are in operation and the drive is direct. The use of a heavy grease may help some, but if the casing is not tight much of the lubrication will be lost. The Joseph Dixon Crucible Company, Jersey City, N. J., makes a preparation for planetary transmissions which is said to be effective where gears are noisy. The replacing of the worn gears with new would be expensive and with some types of planetary transmissions the cure would only be temporary. If the car is an old one it would hardly pay to fit new parts as suggested.—*The Automobile Journal*, May 10, 1913.

ON APRIL 9 Governor Fielder of New Jersey signed the bill known as Printers' Ink bill, relative to fraudulent advertising. Therefore, New Jersey becomes the fourth state to secure an adequate law against fraudulent advertising, and the first to pass the Printers' Ink model statute without additions or even trivial changes in wording.



DIXON'S GRAPHITE BRUSHES FOR COMMUTATORS

The Reason Why We Made Them and the Satisfactory Results

In the year 1900 the Dixon Company installed an electric plant, consisting of engine with a 150 kw. generator and a number of motors running from five H. P. to fifteen H. P. This plant was used for generating power and light for the Pencil Lead Department.

Soon after the installation of this plant we began to have more or less trouble with the carbon brushes with which the generator and motors were equipped.

Knowing of the smoothness and conductivity and other qualities of graphite, we believed that we would be able to make a graphite brush that would give us better satisfaction than the carbon brushes in use. After some experimenting we manufactured a brush that not only proved equal but far superior to the ones that we were using. Still later we largely improved upon our brushes and began to market them.

We may say that now, in the year 1913, we have not since the installation of our electric plant had occasion to turn down our commutators; they are apparently in as perfect a condition in every respect as when first installed. We have since added to our electric plant so that we now have three generators, two of 150 kw. as described above, and one of 300 kw., and have about one hundred motors in use, all of which are equipped with the Dixon Graphite Brushes and all of which are running as nearly perfect as any electrician could hope for or wish.

CONDITIONS OF SERVICE

The subject of graphite brushes is an interesting one, but far too broad for us to attempt to discuss fully here for the reason that the conditions under which the brushes may be used are not uniform.

The engineer in charge of an electric motor may be right in attributing a greater loss in a graphite brush under the conditions of test than would exist if all carbon brushes, for instance, had been used; or he may be wrong in choosing his conditions. Perhaps he may not differentiate between contact resistance and resistance in the mass of the brush, and he may assume that a low resistance brush is the one to be desired.

We do not claim that the graphite brush is especially desirable for low voltages and high current density, for the graphite brush should have greater resistance and is best used in connection with high voltages. In view of its higher contact resistance, it should be used with a current density not greater than thirty-five ampères per square inch of brush contact surface.

Unlike carbon, graphite brushes cannot cut or scratch a commutator. This feature in itself deserves careful consideration in plants where it has been necessary to frequently turn scored commutators to a true surface. On the contrary, if the commutator is in good condition when Dixon's Graphite Brushes are applied, it will soon acquire the dull, glassy polish so much desired by electrical engineers.

Briefly, the use of Dixon's Graphite Brushes prevents sparking and wear of the commutators. They do not gum the commutator, are tough and strong, and have very long life if properly adjusted. They also have a decided advantage because their losses from friction on the commutator are less than with carbon brushes; in addition, the commutator is always automatically lubricated, whereas with carbon brushes there are conditions under which applied lubrication is necessary.

Graphite brushes are not recommended for some special classes of service, such as for electric railway motors, electro-plating machines, etc., but in almost every other case they give far more satisfactory results than are possible with carbon brushes.

We will be pleased to give our opinion as to whether the Dixon Brushes are adapted for any particular machine, if we know the number of brushes used on the machine, the dimensions of the brush, the number of ampères at heaviest load, and the class of service in which the machine is operated.

PROGRESSIVE MANITOWOC

Manitowoc is one of the chief cities of Wisconsin as an educational, manufacturing and shipping center.

The Manitowoc Gas Company is one of the leading and one of the indispensable industries, of which Mr. J. Peter Eastman is the gas engineer. The general experience of Mr. Eastman is such that he may be considered an authority on protective paints. It was with much pleasure that we received the following letter from him:

MANITOWOC GAS COMPANY,
MANITOWOC, WIS.

April 8, 1913.

Joseph Dixon Crucible Company,

Jersey City, N. J.

GENTLEMEN:—In talking with one of your representatives, I was pleased to inform him that I have used Dixon's Silica-Graphite Paint on our gas meters for the last eight years, and in that time it has given entire satisfaction. Last year we put it on our large gas holder and it has proved so much better than the other paints we used, that I am willing to recommend Dixon's Paint to anyone seeking the best protector for metal surfaces.

Yours truly,

(Signed) **J. PETER EASTMAN,**
Gas Engineer.

We take this opportunity of thanking Mr. Eastman, and we fully expect that he will not need to repaint the gas meters and holders for many years. The durability of a protective coating is in the paint you use.

DIXON'S Ticonderoga Flake Graphite tears down friction as a bull moose tears down party traditions.

TWENTY YEARS AFTER

By JOHN J. LECKIE

The basis on which the great American public school system rests is this: equal educational opportunity for rich and poor alike. The free text-book and free school supply laws of the various states owe their existence to the more or less complete recognition of this by legislators.

In Pennsylvania this truth was early recognized. In 1883, twenty years ago, an act was passed by its Legislature requiring school directors or controllers to furnish "school books and other school supplies free of cost" to the pupils of its public schools. And it is the effect of this law on the school supplies in the public schools of Pennsylvania that we wish briefly to discuss in this article.

In Pennsylvania there are about 2600 separate school districts. Each district has its own school board. Each school board buys the supplies used in the schools of the district. Some twenty odd school supply houses, employing a small army of agents, serve these districts. The competition is sharp and prices generally are low. The school boards in the main, however, have adopted certain standards of quality in paper, pencils, pens, ink, etc., below which they will not go. It is quite common for the children in a rural school district to be using as good a pencil and as good a pad as the children in a large city of the state. And, besides pencils of regular size and good quality, such special pencils as, for example, Dixon's "Beginners" Pencil No. 308, for writing in the first grade, will be found in the little district having only one school as well as in the district having hundreds of schools.

The results of the law then, are:

First—The pupils in the public schools of Pennsylvania are very generally using lead pencils, pads, ink, pens, etc., of standard quality and specially designed for school use.

Second—These are being supplied the districts at low figures.

Third—The burden of cost of these supplies, etc., is distributed, as it should be, amongst all the tax-payers of the state.

The section of the Pennsylvania School Code regulating the matter is as follows:

"The boards of school directors of each school district in this commonwealth shall purchase all necessary furniture, text books, school supplies and other appliances for use of the public schools, or any department thereof, in their respective districts and furnish the same free of cost for use in the schools of said districts, subject to such rules and regulations regarding the use and safe-keeping thereof as the boards of school directors may adopt. . . ."

THE CAMEL, it is said, can go without drinking for a number of days. We forget the remainder of the saying but pause to admire this lasting quality which makes the camel so valuable an animal in crossing the desert.

It is much the same when a smokestack, boiler front, iron fence or steel girder is protected with Dixon's Silica-Graphite Paint, for it enables these metal surfaces to go without repainting for years. The lasting qualities of Dixon's Paint are an invaluable aid to those who expect their property to cross the desert of time.



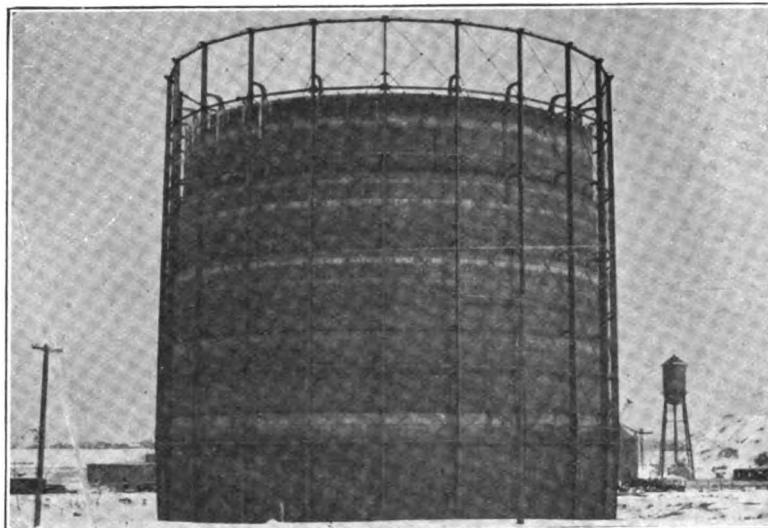
Old Jerry's Protective Paint Talks No. 1

"EASY spreadin' paint is mostly of th' easy wearin' kind—like some graphite paints I know without no backbone to 'em. It's the silica what puts th' fight in graphite an' that's why the shop's been usin' DIXON'S SILICA-GRAPHITE PAINT for the last fifty years. Silica and graphite makes an ideal combination of inert pigments—Nature's own mixture from the Dixon mines at Ticonderoga, N. Y. DIXON'S PAINT means easy work for th' boys, less brush wear for th' boss and an' everlastin' good job for the owners of bridges, boiler fronts, smoke stacks, iron fences an' all other metal surfaces." Write for booklet No. 190-B.

Joseph Dixon Crucible Co.

Established 1827

JERSEY CITY, N. J.



**PROVIDENCE GAS LIGHT COMPANY'S HOLDER,
PROVIDENCE, R. I.**

Six million cubic feet of gas light, power and heat, is the capacity of the holder, which, standing upon piles driven from twenty to forty feet in a salt water marsh, is considered as one of the most notable of the many engineering feats performed by the Bartlett Hayward Company of Baltimore, Md.

Owing to the absence of lattice girders about the guide framing, all parts of this remarkable holder, as may be seen from the view reproduced above, are easily accessible for painting. The three thousand tons of steel in this holder were painted with Dixon's Silica-Graphite Paint, which is the most economical, the longest enduring, and the most popular protective paint for metal surfaces. Owners and painters both like it.

The record of Dixon's Paint as a protective coating for gas-holders extends to all parts of the country, and hundreds of superintendents and other officials of gas companies are convinced by actual trial of its wonderful durability.

The silica and graphite are Nature's mixture of the pigment which we alone mine, and which makes a pigment more mixable in the oil than where silica and graphite are added mechanically. Moreover, our improved mills grind this pigment exceedingly fine, which gives a more clinging and enduring film, which does not flake, but practically becomes part of the metal. No other paint can offer these ideal qualities. Besides, we make it in only *one quality*—the best. Write us for further details if interested at this time.

THE NEXT REVOLUTION

Mr. Roger W. Babson, in a trip through Europe, found much food for thought. He tells us that all progress has been the result of education, whether this education was carried on by parents, church or state, and that revolutions have been between the masses who *had not* and the vested interests who *had*.

In the beginning the masses fought for freedom, thus ending the time when our ancestors belonged to the nobles; next the masses fought for land, thus ending the days of feudalism; lastly our ancestors fought for the right to rule, and this came by granting the ballot.

We are now in the fourth era when the masses are striving for property and a more equal division of the spoils.

It is Mr. Babson's opinion that in the next revolution the masses will seize the educational systems of the world. The school systems will be seized by the people and be recognized with the fundamental purpose of equalizing opportunity and distributing wealth. Those who have not of this world's goods will be taught in the schools how to become efficient and how to get a far greater net wage for their labors. Economics will be taught the children from ten years old upwards; while there will be distinct courses in character building and practical intelligence. The chief purpose will be to develop and organize the masses to accumulate legally a larger proportion of the world's property—both real and personal—and to retain it.

The schools will systematically teach that fortunes are more in the nature of liabilities than assets. The children of those who *have* property will be trained in the public schools not to be afraid to distribute it and to do everything possible to help the masses get more and become more prosperous.

People can be trained to give as well as to accumulate, to despise fashions as well as to worship them, to develop unselfishness as well as to be grasping, so says Mr. Roger W. Babson.

FINDING THE LOW PLACES

On a warm spring morning some years ago, runs a contribution to the *Craftsman*, the late Captain Faulkner of Texas was walking along the highroad, when he met an old negro proceeding slowly toward the village store in order to get his stock of groceries for the coming week.

"Well, Uncle Primus," said the captain, "how are you?"

"Yas, suh; yas, suh; thank you, suh, Marse Faulkner; yas, suh," returned Uncle Primus. "Ah is feelin' good dis spring; Ah suttinly is feelin' fine. Ah doan' remembah as Ah evah felt no bettah in mah life, but some way ruther Ah seems to be gettin' tu de tahm of life w'en Ah's lookin' fer de low spots in de fence."

To find the low places and to make it easy for yourself and your automobile, just try Dixon's Motor Graphite. It finds the low places in the bearings and builds them up until there is a veneer-like coating of flake graphite of enduring smoothness.

THE MAGIC POWER OF PENCIL AND PAD

It was in a railway coach between Salt Lake City and Pocatello, from 2.45 to 9 P. M. Across the aisle and a little back of me were a mother, an eight-year-old boy, and his sisters, about ten and twelve years old. Their dress indicated comfortable circumstances, while the fact that they were to travel forty hours without a sleeper indicated either that their circumstances had changed or that they felt the necessity of being careful of their expenses.

It was two hours before they attracted attention. By that time the girls began to "scrap;" later they began to nag the little brother; later he retaliated.

The mother was calm and firm. She made them change their seats and do various other things to quiet them, but all to no purpose. By six o'clock some of the fellow travelers were amused and the others disgusted. The mother could but have seen how the people looked and have heard what they said.

I began to study the situation. By seven o'clock the small boy had the centre of the ring; and the mother, still calm through it all, told him to go down toward the front of the car and sit. Crying, he went and returned. There was no wholly empty seat and he would not sit with any one.

I asked him to sit with me, which called forth a fresh outburst of tears and he flew to his mother; but she was firm and he had to come and sit with me. I tried to engage him in conversation by a series of questions, but all to no avail. He was still weeping.

"Do you like to make pictures?"

"I have no pencil."

He was handed an attractive, new, well-sharpened pencil.

"Isn't that a fine pencil?" he said; and he picked up some pieces of discarded paper with one side blank, and a discarded university report, and dipped into the drawing with comments upon his achievement, asking questions as to where I was from and where I was going, and how long I was to stay on that train.

As the waste paper came to an end, I gave him a block of paper with nearly one hundred sheets. How his eyes did open!

"How much longer will it be before you leave me at Pocatello?" he asked. He was getting anxious about the time when he would have to part with the pencil.

"I am going to give you the pencil."

How his eyes did open! and he looked up with keenest appreciation.

"Do you mean that this lovely pencil is to be all my own after you leave us at Pocatello?"

"Yes, and the block of paper too."

"All of this paper?"

"Yes."

"Oh, but I do thank you. I am so sorry you will get off at Pocatello."

When he thought I should not see him, he would hold up the pencil for his sisters to see and motion that it was his, and then the paper.

The sisters were so interested in what was going on over there that not one scrapping word was heard for the two hours.

As I prepared to leave the train, and the little fellow was expressing his keen appreciation of my kindness, and deep

regret that it was so soon over, I said: "You are a very manly fellow. You'll be as manly to your mother and sisters as you have been to me, won't you?"

"I bet I will," he said with emphasis. My judgment is, that it was about the best two hours for God and humanity I ever spent, and the best investment of a few pennies' worth of pencil and paper. I can but wonder whether the mother saw how much better it was to provide the boy something to do than to spend time and breath in telling him what not to do.

—*Christian Endeavor World.*

A BEGGING LETTER

Most Fittingly Answered by that Prince of Letter Writers, Mr. Sam Mayer, Manager of the Dixon Chicago Branch

So far as we know all of the members of the Dixon family take off their hats to Mr. Sam Mayer as a letter writer. It may safely be said that as a general writer Mr. Mayer is equally good, but it is impossible to lasso him and tie him down to a literary effort. If you get what you want you must get it off the bat unexpectedly, or in a way that does not permit him to know that you are after anything in particular.

The following letter written by Mr. Mayer is so clear that it will make it unnecessary for us to publish the letter written by the young man in Pittsburgh.

DEAR SIR:—We are in receipt of your communication of May 1, addressed to our president, Mr. Geo. T. Smith, which was forwarded to this office for attention. When you know that Pittsburgh is in the jurisdiction of the Chicago office, we feel that you will pardon Mr. Smith for not taking care of your request personally.

As you mention that any kind of pencil will do to help you through college, we are sending you what is termed in the trade a "D Cedar." They can be bought in the stores at about seven cents a dozen when they are put on the job lot counter. Otherwise, they usually go for a penny apiece.

You will note that the pencil we send you is full of worm holes—this to remind you that sooner or later the worms not only tackle lead pencils but us mortals. We cannot get away from it and like the pencil, our finish is worms. So do not forget while journeying through this mundane sphere you should ask for anything and everything you want, and if it does not always come your way, don't get sore. Other people have been disappointed as well.

This letter should be a great consolation to you and give you strength to bear what is certainly coming to you if you do not get out and hustle and pay for what you want.

Yours very truly,
JOSEPH DIXON CRUCIBLE Co. (Chicago Office)
By SAM MAYER, Manager.

SPEAKING of its "Globe Trotter's" number, *Life* said, "while ostensibly devoted to travel, it will not have a line of information about any place on the globe." So it may be said of Dixon's Motor Graphite: while devoted to travel in every part of the globe it has nothing to say about any place, but much to say about a saving in wear and tear and economy. A postal, care of our Lubricating Department, will bring you some interesting and valuable information.

"THE BATTLE WITH FRICTION"

Mr. Xeno W. Putnam in the May 1913 issue of *The American Thresherman*, says under the above subject as follows:

"There are places and occasions where the use of some other lubrication than any of the oils considered seems preferable. Graphite, for example, possesses some properties which give it certain advantages over all other lubricants. Neither heat nor cold affect it nor is it acted upon by acids or alkalies. In some places it has a greater resisting strength under severe loads than any liquid lubricant. It is especially valuable in filling in the original inequalities of the surface and forming almost a mirror-like surface for the oil lubricants to slide upon. For this purpose it is far more durable than any oil alone and it has frequently been applied by itself or in combination with oil with a success which had hitherto eluded all the oils tried. It is of special value around extra heavy bearings; also for slides, gears, differentials, cams, sprockets and chains, etc. It is also of great value around gasoline engines or where the heat is great. Nuts smeared with graphite may be more easily drawn into place and are easier to remove. A chain treated with it will run dry but silent, and will not gather dust as though coated with grease. In many ways graphite is of great importance around any plant and a supply of it should always be on hand. It frequently solves problems that nothing else will."

The Joseph Dixon Crucible Company prepare special grades of Ticonderoga Flake Graphite for various classes of machinery; also a complete line of highest quality graphite greases. We are always glad to have our readers take up with us their lubricating problems which will have our prompt and careful attention.

DIXON'S BOILER GRAPHITE HIGHLY COMMENDED

HALE AND KILBURN COMPANY

PHILADELPHIA, PA., Jan. 30, 1913.

*Joseph Dixon Crucible Company,
Jersey City, N. J.*

GENTLEMEN:—I have been using graphite in our boilers for the past five months and it has worked a wonderful change, the scale is all removed from the sheets and the steaming capacity has increased twenty-five per cent.

I highly recommend Dixon's Flake Boiler Graphite to all engineers who are troubled with scale in boilers, as it will do the work without injuring the boiler in any way.

Yours truly,

HALE AND KILBURN COMPANY,
(Signed) JOHN J. DONAHUE,
Chief Operating Engineer.

ONE OF THE Dixon branch managers, possessed of great temerity or who was not aware of the number of militant Methodists in the Dixon office, sends in the following from *The Philistine*.

The lady approached the paying teller's window and pushed in a check for ten dollars

"What denomination?" asked the teller.

"Methodist," said the lady.

He paid her the money in nickels.

KNOWN BY ITS ACTIONS

Dixon salesmen are frequently called upon to explain the difference between Dixon's Flake Graphite and other kinds, particularly of the amorphous variety. The question sometimes involves the expenditure of a great deal of time and the story is not repeated more often than seems necessary. A Dixon salesman, not wishing to offend his questioner, but at the same time knowing the futility of a lengthy explanation, related the following story of a master plumber who was presented with a trained flea, a very spry and bright little chap.

"The flea, whose name was John Henry, was nicely domiciled in a glass jar, with a white papered bottom, upon which his royal fleaship could more easily be seen. The master plumber placed the jar in his shop window, figuring that it would catch the public eye and so let people know that he as a master plumber in the town was alive and active. He put a placard in front of the jar. It read: "Champion Acrobatic Flea of America."

One day a fat, jolly lady came lumbering into the shop to make inquiries about some water pipes she wanted fixed. While in the shop she incidentally asked, out of sheer curiosity, about the trained flea.

"Really, Mr. Jones, I'd love to see that little creature perform."

"Very well, madam, I'll have him do a few stunts," responded the polite master plumber.

Whereupon he took John Henry in his hand and the performance began.

"John Henry, stand on your head." John Henry did so. "John Henry, stand on your hind legs." His fleaship graciously did so.

"My, how cute the flea is," commented the lady. "Might I hold him in my hand a minute? He won't run away, will he?"

"No, I don't think so," replied Mr. Jones, as he placed John Henry in the palm of her hand. Henry sat there a minute or two and cocked his saucy little head and then he—leaped. Where? Why, right up into the fat lady's sleeve.

"Oh, my gracious!" she screamed. "Will he come back?"

Then she reached up her sleeve in an endeavor to catch it.

"Did you get him?" inquired the master plumber, excitedly.

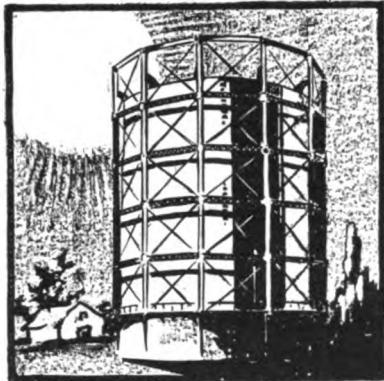
"Yes, I've got him; here he is," she replied.

The plumber placed the flea in the hollow of his hand. "Stand up, John Henry," said he. John Henry wouldn't budge at all. "Stand on your hind legs!" commanded Mr. Jones. The flea remained motionless.

"Say, lady!" exclaimed the master plumber, "That's not my John Henry!!!"

"Dixon's Flake Graphite," concluded the salesman, "is known by its actions. Its impossible to confuse its performance in competition with other graphite."

"ADVERTISING made Homer great thousands of years after he was born and introduced Ramese to admiring friends 4,000 years after he had retired from circulation. Chicago consists of Goshen, Indiana, plus advertising. Advertising has kept Sarah Bernhardt young and attractive for sixty-several years—and the lack of it made Poe starve at forty."



The terrific heat of the sun neither cracks nor blisters Dixon's Silica-Graphite Paint. Examine any of the hundreds of gas holders that testify to this fact. Write for "Painting the Gas Holder, No. 190-B."

Nature Spent Ages In Making Silica- Graphite

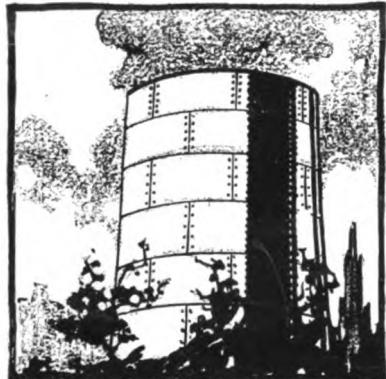
FROM a purely mechanical mixture of silica-graphite and oil the form will settle into a hard compact mass. But

such settlement never occurs when silica-graphite pigment is used, for the reason that the particles of silica and graphite adhere to each other. Moreover, the pigment is practically inert and indestructible. These properties explain why, for fifty years



The standard of paint protection for railroad bridges, viaducts, etc., is Dixon's Silica-Graphite Paint. America's largest railroads use it. Write for "Graphite Products for the Railroads, No. 190-B."

DIXON'S SILICA-GRAPHITE PAINT



Many hundreds of water companies protect their property with Dixon's Silica-Graphite Paint. Underwriter's Associations have strongly recommended Dixon's Paint as perfect for this service.

has maintained its position as the most durable paint for the protection of iron and steel. Because of this great durability Dixon's Silica-Graphite Paint gives the very highest economy. We have the proof. Prepared in ONE QUALITY only, the best. Write us about the particular property you have to protect.



Architects and engineers specify Dixon's Silica-Graphite Paint for all kinds of structural steel work. They know that longer service is true paint economy. Write for our "Notable Buildings" list.



Steel cars are subjected to more severe treatment than perhaps any other kind of metal surface, and yet Dixon's Silica-Graphite Paint has proven to the entire satisfaction of railroad officials its ability to meet the conditions under which steel cars are used.

Joseph Dixon Crucible Co. Jersey City, N. J.



ESTABLISHED 1827



Many magnificent fences owe their preservation and good appearance to the wonderful service rendered by Dixon's Silica-Graphite Paint. Write us about the subject and we shall be glad to tell you of the experience of others with Dixon's Paint.

GRAPHITE



VOL. XV.

AUGUST, 1913.

No. 8.

Issued in the interest of Dixon's Graphite Productions, and for the purpose of establishing a better understanding in regard to the different forms of Graphite and their respective uses.

A SCIENTIFIC TARIFF

In the address of Professor Henry C. Emery to the Boston Chamber of Commerce, a short time ago, he said:

"The advantage of the foreign system is that it provides for a permanent staff of trained experts in the different departments of the Government, who make a life study of the problems involved in such legislation and acquire an accumulated knowledge of the industrial conditions, which is constantly at the service of their superiors, whether in the Administration or in Parliament. These Government officials are not legislators concerned with many other affairs, but are trained experts of permanent tenure, who devote themselves solely to this question and have years of experience behind them. They

are free both from the pressure of local business interests and from any political bias. They do not have to consider the effect of their conclusions either upon their own tenure of office or upon the success of any particular party. The hearings are not crowded into a space of a few months, so that an overworked committee is not swamped with material which it cannot fully comprehend. The work goes on, day in and day out, over a period of years, and is conducted continuously by the same men who have received and carefully considered every complaint regarding the tariff which has been made from any source during the whole time of its operation.

"In this country (the United States) no such body exists. Veteran members of the Ways and Means Committee have acquired a wide familiarity with the details of the subject, but even they are hampered by the fact that they have many other problems on their hands, and no time to make an independent study of industrial conditions."

The Professor went on to say: "I believe that the business men of the country will continue to demand some addition to our administrative and legislative machinery by which problems of this kind shall be settled on the basis of unprejudiced, non-partisan investigation.

"Whatever scheme may be adopted, several things should be kept in mind. First, these problems cannot be solved merely by a force of statistical clerks. They are not problems of statistics or mathematics, but require a broad grasp of industrial conditions in various parts of the world, and can only

be properly met by a body which has at its disposal adequate powers and adequate funds for careful and independent investigation."

NOT OUR JOSEPH

We have been asked if Dr. Joseph Kossuth Dixon, who is to head the Rodman Wanamaker Expedition of Citizenship to the North American Indian, is the Joseph Dixon of the Joseph Dixon Crucible Company, or any relative of our Joseph? So far as we know, Joseph Kossuth Dixon is not related to Joseph Dixon, the founder of the Joseph Dixon Crucible Company, but he evidently is made of very much the same energetic, go-ahead material.

The Rodman Wanamaker expedition is the third of a similar nature sent out by Mr. Wanamaker since 1909. Dr. Dixon goes with the authority of President Wilson, Franklin K. Lane, Secretary of the Interior, and F. H. Abbott, Acting Commissioner of Indian Affairs. He will travel more than twenty-two thousand miles, will be away six months at least, and will go to every one of the 169 tribes in the United States. His trip will bring him into touch with almost all of the three hundred and twenty thousand Indians in this country.

AT THE recent Air Brake Convention held in St. Louis, the subject of graphite lubrication was given much attention, and there was much discussion on this important subject.

It is only a few years ago when the Dixon Company first started the subject of the use of graphite for air brake work, and the thanks of the Dixon Company will always be given to the railway air brake experts whose painstaking tests determined the fact that Dixon's Air Brake Graphite would probably be the future lubricant in air brake work. At that time, however, the use of graphite for air brakes was looked upon as being too radically different from the practice which was in vogue, and it certainly is very gratifying and encouraging to the Dixon Company to find how fully all our claims have been substantiated by the general adoption of the Dixon Graphite Lubricants as the standard lubricant for the delicate air brake mechanism.

WE IN the East know only the Atlantic Ocean and Atlantic City, Coney Island and other coast resorts it has given us. But the Pacific is the ocean of the future. On the bosom of the great Pacific will be decided in peace or in war, the next great struggle of civilization, which will give as its prize the supremacy of the world.

ESTABLISHED 1827



INCORPORATED 1868



JOSEPH DIXON CRUCIBLE CO.

JERSEY CITY, N. J., U. S. A.

**Miners, Importers and Manufacturers of Graphite,
Plumbago, Black Lead.**

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EUROPEAN AGENTS,

Graphite Products, Ltd., 218-220 Queen's Road, Battersea, London.

F. O. B. VS. C. I. F.

Advantages of the F. O. B. Quotation

In July GRAPHITE we published some remarks made by Mr. A. M. Fisher at a luncheon of the American Manufacturers Export Association, in which claims were made of the advantages of the C. I. F. quotation over the old time practice of an F. O. B. price. Our representative at Buenos Aires, Mr. Alfred J. Eichler, writes us as follows:

"I have read with considerable interest the speech made by Mr. A. M. Fisher. I cannot agree with him, however, in all he says, as the statements are far too sweeping, and while his arguments sound very plausible, it will not work out as nicely in actual practice as what he would lead one to believe."

"At the present time not less than ninety per cent of the goods sold in South America are sold on an F. O. B. shipping point basis. This would serve to indicate that this method is

satisfactory to the buyer at this end, and the satisfaction is caused by the following reasons. In the first place, we must not forget that the C. I. F. price is just as old as the F. O. B. price, as far as all ordinary purposes are concerned. The buyer at this end realizes that if a manufacturer makes a C. I. F. price that he has added to his F. O. B. selling price the maximum freight rate, and also a little more to cover further advances in freight, which by the way, have nearly doubled in the last six or seven years.

"The keen buyer, knowing what is necessary for the manufacturer to add for his protection, prefers the best F. O. B. price, and to get the benefit himself of any lower freight rates that may be in existence at the time the goods were shipped.

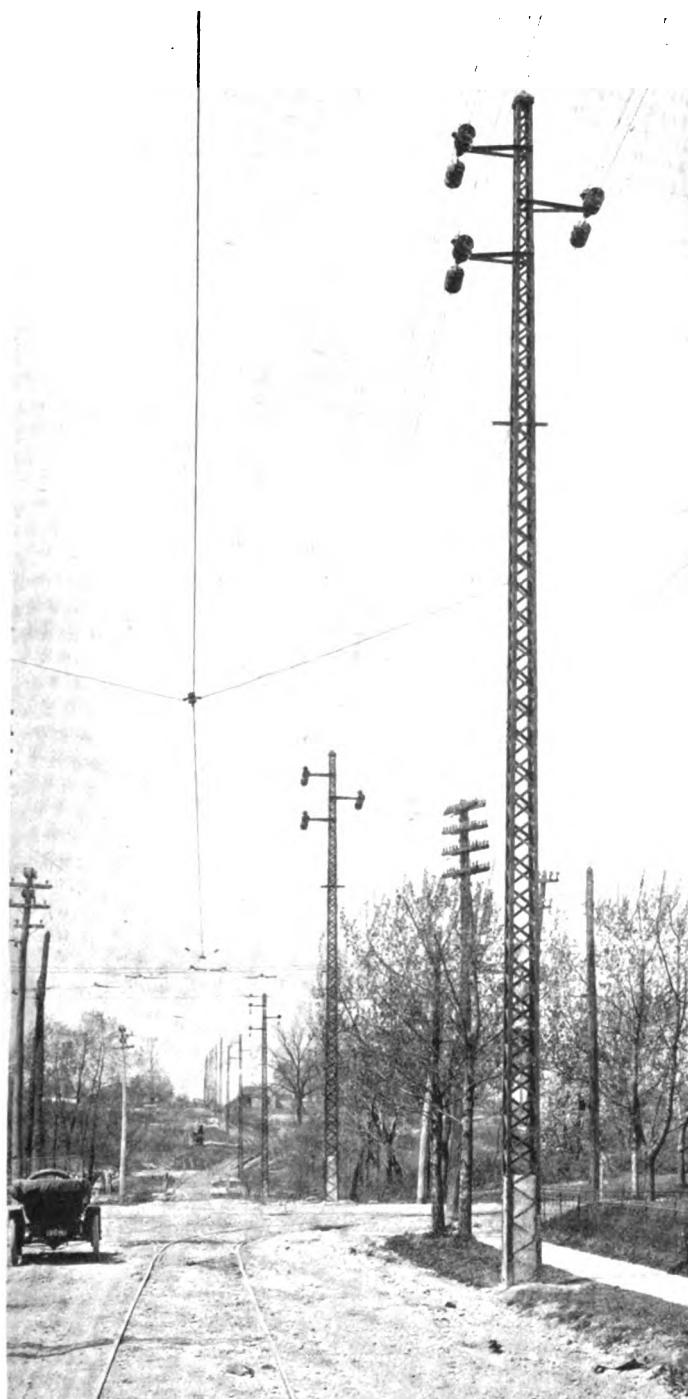
"If a buyer at this end is purchasing an article where the cost of the freight is, say, thirty per cent or more of the cost of the article, he naturally prefers a C. I. F. price, as the cost put into his store would depend very largely on the freight rate, and unless he had been buying the article regularly, it would be very difficult for him to gauge the cost unless he had a C. I. F. price.

"I think some of Mr. Fisher's statements are rather misleading, as he compares C. I. F. and F. O. B. London prices, which is not a fair comparison to make in an argument of this kind, as it tends to strengthen the C. I. F. argument by a theory that does not exist in actual practice. If the goods were going from New York to London, it would be F. O. B. New York or C. I. F. London, as no one ever makes in the export business, to my knowledge, an F. O. B. price for the point of destination. On a C. I. F. quotation you are responsible for such charges as lighterage, etc., which you would not get in an F. O. B. price. Also on an F. O. B. price your responsibility ends when the goods are put on the boat at New York, while if C. I. F. you are responsible to the port at which your C. I. F. is quoted to.

"So far as the Dixon business is concerned, you would still have to quote the New York commission houses an F. O. B. price, and as it would be necessary for you to add the maximum freight rate, and a small percentage to cover increases, you would sooner or later have trouble with your clients who are doing business direct, as they would find that it would pay them to purchase from the commission houses to get the benefit of the lower freight rate. Another point would be that some of the clients would still prefer an F. O. B. price, and if we made two sets of prices it might lead to confusion, although of course we do make exceptions now by quoting C. I. F. At the present time I can quote the customers a price which, if they wished to purchase through a commission house, they know they will receive the same price. If by chance they did not mention that they wished an F. O. B. price, and I quoted a C. I. F., and they then sent their order to a commission house, and upon receiving the goods found that our price actually proved lower than what the F. O. B. price was plus the freight rate, it would cause you trouble with the commission house. If, on the contrary, the commission house price proved lower, they would think that I was trying to hold them up.

"I believe that you will agree with me after reading the above, that until we have a strong demand for C. I. F. prices, that we had better continue using the F. O. B. price. I would like, however, to learn your opinion regarding this matter."

All things considered, we favor Mr. Eichler's position.



**STEEL TROLLEY POLES OF AMERICAN GAS
AND ELECTRIC COMPANY**

The accompanying photographic reproduction of a line of Coombs Type "A" curb line poles, represents one of the best examples of high grade pole line construction. As is evident from the illustration, the structures are a pleasing improvement upon the more perishable and more numerous wooden poles sometimes used in similar locations. The electric power line in question belongs to the American Gas and Electric Company, one of the large operating companies in the electric light and power field, and is an example of what may be done by a Public Utility Corporation, under competent advice, to promote efficiency and local improvement.

The poles were designed by Mr. R. D. Coombs, Consulting Engineer, and built by R. D. Coombs & Co. of New York City.

These poles are protected by Dixon's Silica-Graphite Paint, which is known world-wide as the great economy paint, because it *lasts longer*, thus saving in material and labor. Moreover, it is made in only *one grade*,—*the best*, which is a guarantee to the owner of property that his interests are being properly protected. It is the only silica-graphite paint that is able to use Nature's mixture of the silica and graphite.

WARM WEATHER EATING

Now in this summer's heat we should be careful about our eating, and we are told in one of the papers that warm weather eating is an exact science, like algebra or quieting the baby. As a matter of fact, the chief point about this hot weather diet is not surrendering to the clamor of one's inner man.

In the early morning, when a certain sensation of hunger is experienced in the region of one's equator, just merely swallow eight or twelve mouthfuls of the climate, and then start for the office.

At ten o'clock (possibly at nine) a second sensation not unlike the first will be experienced. Don't relax your vigilance—that will be fatal. Just draw in more of the atmosphere, but don't gorge yourself. Atmosphere in the summer time is a very rare and precious commodity. Persons swallowing more than their just share are liable to prosecution under the Sherman act.

At twelve o'clock you may venture the ghost of a luncheon, consisting, say, of boiled bul-buls and a few rasps of raspberries. Boiled bul-buls, according to Mr. Sam Mayer, are especially desirable.

In the afternoon you will find that work is a fine substitute for food. If you work steadily until six o'clock it will then be supper time and you may indulge freely in a blueberry and a flake of sea biscuit.

By following this plan for several weeks you should be beyond any need of food whatsoever.

A LEAD PENCIL TRICK

Do you remember when you were a lad the old ball field where the boys got together?

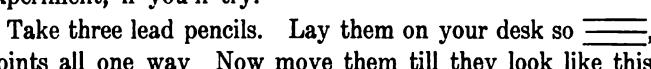
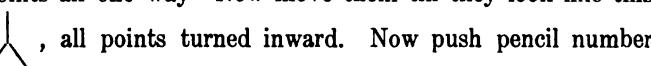
Do you remember the first time you saw one of the fellows take three baseball bats and arrange them into a seat?

Do you remember how self-satisfied he seemed when he kicked the seat apart, told you to do it and you couldn't till he showed you how?

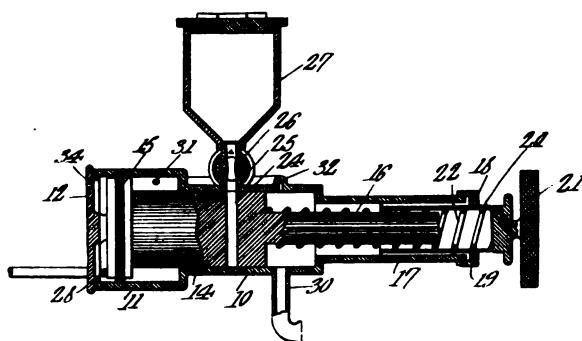
Do you remember how easy it was after you'd been shown?

Of course you do. Every man who ever played ball as a boy remembers.

You can do it now, perhaps, not at once but after a minute's experiment, if you'll try.

Take three lead pencils. Lay them on your desk so , points all one way. Now move them till they look like this , all points turned inward. Now push pencil number one over pencil number two. Then push pencil number three under pencil number two and bring its point up so that it rests on pencil number one. And there you are.

Very simple, isn't it? And as firm as the rock of Gibraltar. It will hold a thousand times its own weight.—*The Ambassador*.



A NEW GRAPHITE LUBRICATOR

In the belief that our readers are interested in any new device for applying graphite for lubricating purposes, we endeavor to keep them posted as fully as possible. The latest Graphite Lubricator that has been brought to our attention was patented last June and is the invention of Mr. Leland D. Smith, 196 Penn Avenue, Louisville, Ky. The following description is taken from the patent papers:

"This invention relates to an improvement in lubricators.

"The primary object of the present invention is to provide means for supplying quantities of flaked graphite to engine cylinders.

"In the drawings is shown a longitudinal sectional view of the device.

"In the drawings 10 designates a cylinder which is formed with the enlargement 11, the open end of the enlargement being closed by a cap or plug 12. Arranged within the cylinder is a piston 14, which is provided with a head 15, said head being free to work in the enlargement 11. The piston is provided with a reduced stem 16, which extends within the reduced portion 17 of the cylinder. The open end of this reduced portion 17 is partially closed by the annular member 18, said annular member being formed with an opening 19 through which is inserted the cylinder 21', said cylinder being formed with a knurled knob 21. A spring 22 is arranged within the cylinder, said spring being coiled around the stem of the piston, one of its ends contacting with the enlarged portion of the piston, the other end contacting with the end wall 20 of the cylinder, the tendency of said spring being to hold the piston in the position shown. Arranged to communicate with a transversely disposed passage or pocket 24 in the enlarged portion of the piston is an intake pipe 25, in which is positioned a valve 26. Supported on said pipe is a cup 27, in which the graphite is placed. It will be noted that the graphite in the cup 27 will descend through the intake pipe and pass into the transversely disposed pocket formed in the enlarged portion of the piston. The cylinder in advance of the piston head is provided with an air or steam intake port 28, it being noted that when air or steam is admitted to the cylinder, the same will force the piston, against the tension of the spring, bringing the graphite pocket of the piston in alignment with a distributing tube 30, through which the graphite is passed to the parts to be lubricated. The enlarged portion of the cylinder, which receives air under pressure, communicates with the cylinder at a point immediately above the distributing tube 30.

"In operation, the cup 27 is filled with graphite and the valve in the intake pipe 25 is opened, the graphite descending within the transversely disposed pocket of the piston. A suitable valve is then opened to admit steam or air under

pressure to the cylinder behind the piston, forcing said piston against the tension of the spring 22, until the transversely disposed pocket aligns with the delivery pipe. With said delivery pipe in alignment with the transversely disposed pocket the pocket will also align with the air port 32, the air or steam passing through said port, and forcing the material contained within the pocket through the distributing or outlet pipe to the parts to be lubricated. After the supply of graphite has passed from the pocket, and the supply of air or steam cut off the piston will be returned to its normal position by means of the coiled spring 22, the air escaping through the port 34 arranged in the cap, which closes the enlarged portion of the cylinder, said port 34 being of smaller diameter than the opening 28 of the supply pipe.

"The many advantages of a lubricating device of this character will be clearly apparent as it will be noted that the same affords simple and convenient means for supplying graphite in a dry condition to an engine cylinder. It will also be noted the entire structure is such as may be easily and economically manufactured, the various parts being readily assembled."

These cups are designed especially for use on steam locomotives. One locomotive in passenger service, that was equipped with one of these cups made 35,000 miles without a removal of valves or cylinder rings. Several other of these cups have been in use in passenger service for a considerable time on locomotives using saturated and superheated steam, and have surpassed all expectations in the way of saving oil, packing rings, valve bushings, piston packing, coal and water. They make faster and better engines and are stated to be one of the best paying improvements that have been tried. The cups are arranged so that one can use as much or as little graphite as is wanted and whenever it is wanted.

Needless to say Dixon's Flake Graphite No. 1 is the only graphite used in these lubricators.

ELSEWHERE in this number will be found an article well worth the careful reading for any one interested in good goods or good advertising. The article is a product of Miss L. M. Stocking, head of the Paint Department of the Dixon Company, and Mr. Paul Morse Richards, well known expert in advertising, who is also classed as a member of the Dixon family.

The title of the article is, "Passing the Word Along." We are tempted to repeat some of the strong points of the article in this paragraph, but believe we would only be spoiling the feast of reason and flow of soul that will be found in the reading of the article itself.

FOR STICKING SPARK PLUGS

Motoring Department, *The New York Globe*.—Can you tell me some way to prevent a spark plug from sticking so that it can be removed without injuring it? I have broken two by "strong arm" tactics, and therefore I am now looking for something less expensive.—K. HUTCHINSON.

A thick paste of flake graphite and oil will serve your purpose. The graphite will prevent adhesion of the metals and at the same time prevent leakage as well. The mixture is also advisable to use on bolts and studs which are subjected to considerable heat.

THE WORLD OUTLOOK

The time is approaching when the falling of the tariff wall will compel the present protected trade of the United States to enter into competition with the great nations of the world and cause it to seek its source of supplies and to market its products along with England, France, Germany and the other European countries.

The opening of the Panama Canal, then, comes at an opportune time as a means of opening up new fields for exploitation, of developing new markets and forming new trade routes.

In the great seaports of the world, ships are being constructed, dock and harbor improvements are under way, great exporting houses are sending their agents throughout Central America to study the trade opportunities offered in this field.

The people in South America are more progressive than some Americans and Europeans believe, but the English and Germans, on the other hand, have been awake to the value of these markets.

The greatest of these new countries, however, and the one which has already attained the greatest state of development, is Chile. The coast line extends some 2,500 miles, embracing nearly every variety of climate. The Chilian Government encourages new enterprises, and machinery for new manufactures is admitted into the country free of duty.

The United States is hampered by antiquated navigation laws, its selling and advertising methods are not well adapted to the customs of foreign nations. The merchant who wants to extend his business must see the situation from the viewpoint of the people whom he would make his customers. He must recognize the trade terms of the South American, who almost invariably demands 60 to 120 day payments, and who will not tolerate a "take-it-or-leave-it" attitude.

Why do Germany and England have a large export business with South America on the same goods as are made to great advantage in the United States, while our shipments amount to practically nothing? Investigation will show that they have studied and acted in a whole-hearted, persistent manner, while our merchants have spasmodically "taken a flyer," and if the "flyer" was not profitable, have dropped the matter. For instance, South America is the great cement country of the world, but Germany gets the bulk of the South American trade. Why? Because the Germans have studied the situation carefully and have used correct selling and shipping methods. American dealers have been known to ship cement in the same barrels which have been used for local trade, wholly unfit as a protection from moisture, and when the cement arrived in South America its condition can well be imagined. The Germans, on the other hand, have shipped their cement in water-tight barrels.

The cement production of the United States in 1910 was 50% greater than that of Germany, and yet German exports of cement in that year were nearly 100% greater than our own. To Chili in 1910, Germany exported over 350% more cement than did the United States, and in 1911 over 1900% more, and yet the United States was demoralized by an oversupply.

The whole situation is summed up by the statement that Americans have not studied this question. The well known faults of American labeling, packing and selling are details that should be corrected by a proper study of the selling, ad-

vertising, trade and social customs of the prospective markets. The study of world fundamental conditions must be done by individuals; they cannot expect to have development work done by exporting houses. Individually or co-operatively, they must go after foreign opportunities. Indifference and contempt must give way to careful, studied attempts to please the foreign buyer and to conform to his ways and customs. The seller must seek out and please the buyer as in this country.

—Babson's.

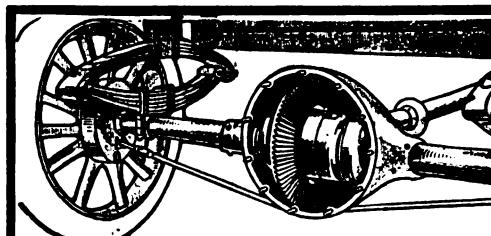
A HINT TO PRINTERS

The uses of graphite are innumerable; and the end is not in sight. Its latest invasion has been into the printer's domain, where it is driving out the old "soap wrinkle" and taking possession of the rack runners as rapidly as it can get into the thirty thousand and more printing offices in the United States. In advising printers to use graphite on their case runners, "Teddy Facey" in the *American Printer* for May says:

"You have no doubt read time and again in the trade journals on the efficiency of soap as a means of helping cases work easily on the rack runners. That is an old 'wrinkle'; and while a fairly good one, isn't to be compared for the same purpose to this, as you'll willingly admit an hour after you've tried it:

"Lift the cases from the rack and sprinkle two or three pinches of powdered graphite on the runners. With a piece of rule (or your forefinger if you choose) smear it along the full length. Put the cases back, and if it was merely the runners that needed doctoring note the result. One application of the graphite will be sufficient unless you've got a life-time mortgage on the job."

AN INQUISITIVE READER OF GRAPHITE ASKS: "If a girder stooped to steel would Dixon's Paint protector?" Of course.



Fine for Differentials and Transmissions

Dixon's Flake Graphite Lubricants do what plain oil or grease cannot do—permanently produce on bearing surfaces a durable, almost frictionless veneer that prevents metallic contact, wear and noise. This is why a car lubricated with

DIXON'S Graphite Lubricants

is free from the usual friction troubles. It runs sweetly—and with increased power because of the graphited bearing surfaces.

Ask your dealer for Dixon's Graphite Lubricant No. 677, a highest quality mineral grease scientifically mixed with Dixon's Motor Graphite. Try it in your differential and transmission. Stop the noise—gives longer life to the gears—does not leak out like oil.

Valueable book, "Lubricating the Motor," sent free for name and model of your car.

JOSEPH DIXON CRUCIBLE CO.
Jersey City Est. in 1827 New Jersey



**DIXON'S SILICA-GRAPHITE PAINT USED IN
THE SOUTHERN STATES**

The inquiry is often made as to what kind of structures Dixon's Silica-Graphite Paint is specially adapted for.

We are giving below the following list of customers who have purchased Dixon's Paint through our Atlanta, Ga. Office, Fourth National Bank Building, (Mr. J. H. Lewis, Manager). The list speaks for itself, as it covers the largest concerns and all kinds of metal structures.

Our experience is the same from the great northwest provinces of Canada down to Texas, and in all foreign countries.

Dixon's Silica-Graphite Paint is *sans pareil*.

NORTH CAROLINA

ASHEVILLE

Court House roof.—Gas holders.—Trolley poles of Electric Company.

BURLINGTON

Williams Cotton Mills roofs, stacks and tanks.—Aurora Cotton Mills roof.

CHAPEL HILL—College Buildings.

CHARLOTTE

Water tower.—Gas tank.—Central National Bank.—Buckeye Cotton Oil Company tanks and stacks.

DURHAM

Durham Manufacturing Company roof.—Post Office roof.
Erwin Cotton Mills roof.—Carolina Power Company stacks.
Golden Belt Manufacturing Company stacks.

FAYETTEVILLE—Post Office.—Cape Fear River Bridges.

GIBSONVILLE—Gem Cotton Mills.

GREENSBORO—Electric Company stack.—Water tower.

HAW RIVER—Granite Manufacturing Company roof.

HENDERSON

American Cotton Oil Company stacks.—Henderson Cotton Mills.

HENDERSONVILLE—Justice Drug Company roof.

HIGH POINT

Picket Cotton Mills.—Water towers.—Oak Hill School stacks.

LAURENBURG—Dixon Cotton Mills roof.

LONG ISLAND—Buffalo Shoals Bridges.

NEW BERNE—Gaston Hotel roof.

MOREHEAD CITY—Water tower.

MORGANTON

Court House roof.—Morgan Furniture Company stacks.
ROCKY MOUNT—Water tower.

RALEIGH

Carolina Power Company stacks and cooling tanks.

SHELBY—Water tower.

WASHINGTON—Water tower.—Oil Company stacks.

WILMINGTON—Champion Compress roof.

WINSTON-SALEM

Reynolds Tobacco Company roof.—Huntley Furniture Company roof.

SOUTH CAROLINA

AIKEN

Water tower.—Carolina Light and Power Company stacks and tanks.

BENNETTSVILLE

Electric and Water Company tanks and stacks.

CHARLESTON—Union Station.—Y. M. C. A.

COLUMBIA

Jefferson Hotel.—S. A. L. Viaduct.—Water tower Y. M. C. A. Arcade.

DARLINGTON—Water tower.—Power Station stacks.

FAIR FOREST—Arcadia Mills.

GREENVILLE—Duncan Mills tank.

GREENWOOD—Panola Mills water tower.

NEWBERRY—Water tower.

PORT ROYAL—U. S. Naval Barracks.

SPARTANBURG—Ligon Mills roof.

WESTMINSTER—Oconee Mills.

GEORGIA

ATLANTA

Whitehall Viaduct.—Peters Street Viaduct.—Atlanta Terminal Station.—Jacobs Pharmacy tank.—Commerce Hotel tank.—McCord-Stewart tank.—S. S. S. roof.—Buckeye Cotton Oil Company tank.—Swift Soap Works stacks.

ATHENS—Gas Holders.—Electric Company stacks.

AUGUSTA

Gas Holder.—Buckeye Cotton Oil Company tank.

BRUNSWICK—Mutual Water and Light Company stacks.

CLYO—S. A. L. Bridge.

DARIEN—McIntosh County Bridges.

ELBERTON—Water tower.

MINERAL BLUFF—Blue Ridge Ex. Works stacks.

MADISON—Standpipe.

QUITMAN—Atlantic and Gulf Mills stacks.

SAVANNAH

Chatham County Bridges.—Savannah River Bridges.
S. A. L. shops.—Union Station.

FLORIDA

CARYVILLE—L. & N. Bridge.

CITRONELLE—Florida Power Company.

INVERNESS—Southern Phosphate Development Company.

JACKSONVILLE

Electric Light Company stacks.—Upchurch Lumber Company stacks.

KEY WEST—Gas Holder.

MELTON—L. & N. Bridge.

MAYO—Florida R. R. Bridge.

PIERCE—Phenix Phosphate Works.

PENSACOLA—Gas Company.

RIVER JUNCTION—L. & N. Bridge.

ST. AUGUSTINE—Standpipe.

ALABAMA

ANNISTON—White Way poles.

BIRMINGHAM

Buckeye Cotton Oil Company stacks and tanks.—Water Mains.

BAYLES—L. & N. Bridge.

DECATUR—Gas holder.

DEMOPOLIS—American Cotton Oil stacks.

FLORALA—County Bridges.

GREENVILLE—County Bridges.—Ice Company stacks.

HOLT—Central Foundry Company.

HUNTSVILLE

Merrimac & Dallas stacks.—Railway, Light and Power Company.

LOCKHART—Jackson Light Company stacks.

MAPLESVILLE

County Court House.—Twin Tree Lumber Company stacks.

MONTGOMERY—L. & N. Station.

MOBILE—Railway, Light and Power Company stacks.

OZARK

Henty Refining Company stacks.—Light and Power Company stacks.—Dowling Hardware Company roof.

PIEDMONT

Coosa Manufacturing Company roof, stacks, tanks.

SELMA

Buckeye Cotton Oil Company tank.—American Cotton Oil Company tanks and stacks.

TROY

Standpipe.—Standard Chemical and Oil Company stacks.

TUSCALOOSA—University roof, stacks, tanks.

MISSISSIPPI

CANTON

Masonic Temple.—Light and Power Company stacks.
Mississippi Company stacks and roof.

COLUMBUS—Girls Industrial Institute roof.

CLARKSDALE—Foot Bridge.

GRENADE—Buckeye Cotton Oil Company tank.

GREENWOOD—Buckeye Cotton Oil Company tank.

JACKSON

Buckeye Cotton Oil Company tank.—Light and Power Company stacks.—Gas holder.

LAUREL

Laurel Cotton Mills roof.—Eastman-Gardner Lumber Company stacks.

NATCHEZ—Standpipe.

TUPELO—Railway, Light and Power Company stacks.

STARKSVILLE—R. & M. College roof and tank.

VICKSBURG

National Military Park Fence.—Peoples Cotton Warehouse roof.—Gas holder.

H. E. BURDETTE, J. C. PRIOLEAU,
Secretary to Committee of Nine Assistant Secretary to Committee

SPRINKLERED RISK DEPARTMENT

SOUTH-EASTERN UNDERWRITERS ASSOCIATION

ATLANTA, GA.

A. B. ANDREWS, Manager

September 2, 1910.

CIRCULAR LETTER:

CARE OF WATER TANKS.

In accordance with our custom of trying to give our clients the best possible service, we take this occasion of bringing to

your attention the necessity of carefully watching any steel work in connection with the fire appliances. We refer especially to the steel tanks and trestles forming one of the water supplies for the sprinklers and hydrants.

During the past few months there have been several fatal accidents in the North and in Canada, caused probably by improper care of the tanks and their supports.

We have consulted with a number of tank builders as to the best method of taking care of tanks and trestles, and we have come to the conclusion that the tank and the trestle ought to be gone over once every two or three years, carefully scraped where necessary and a good coat of graphite paint applied. The inside of the tank should be painted once every four or five years.

It is not our custom to advertise any special device or material, but in this case from our investigations we have come to the conclusion that Dixon's Silica-Graphite Paint is an excellent paint for this class of work. In fact, it seems to give better service than any other paint we have heard of.

There may be other paints that are good paints for this class of work, but replies we have received from tank builders indicate that in their judgment this is the best paint on the market.

We urge you to carefully investigate the condition of your tank and trestle, and if they have not been painted in the last three or four years they probably need attention.

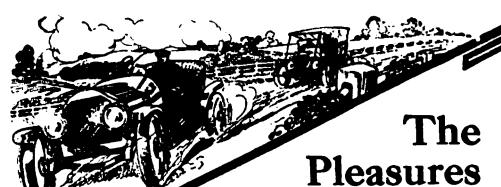
(Signed) H. E. BURDETTE,
Secretary to the Committee.

THE MORNING AFTER

Visitor—"Are the ladies in?"

Butler—"Yes, sir; they are all in."

Visitor—"Oh, I beg your pardon! I'll call again when they are feeling better."—*Harvard Lampoon.*



The Pleasures
of Touring
Are Assured
when you lubricate with
**DIXON'S
Motor Graphite**
(Pulverized Flake)

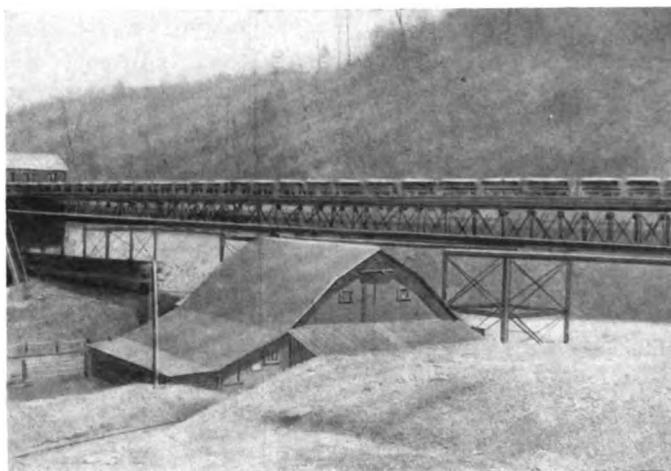
Dixon's Motor Graphite goes direct to the cause of friction troubles—microscopic roughness. It fills in the minute depressions, becomes pinned upon the tiny projections, forming a thin, tough, veneer of marvelous smoothness which prevents metallic contact. This means less friction and wear—no more hot or cut bearings—more power from your engine and a smoother running car.

Mix it with your own choice of lubricants or we will do it for you, as we manufacture a full line of greases containing Dixon's Motor Graphite.

Ask your dealer for Dixon's Graphite Lubricant No. 677—a highest quality mineral grease scientifically combined with Dixon's Motor Graphite. Fine for differentials and transmissions. More economical than plain oil or grease. Our free book, "Lubricating the Motor," gives a money-saving solution of the lubricating problem. Send name and model of car.

Joseph Dixon Crucible Co.
Established in 1827
Jersey City New Jersey





PAINTED COAL TIPPLES---NOW WANTS TO PAINT SMOKESTACKS

Superintendent of Vinton Colliery Company Writes That Dixon's Paint Gave Excellent Results

Mr. T. W. Hamilton, superintendent of the Vinton Colliery Company, miners and shippers of Vinton bituminous coal at Vintondale, Pa., decided recently that the company's smokestacks needed to be repainted.

About two years ago the same company's steel coal tipples, one of which is illustrated above, were painted with Dixon's Silica-Graphite Paint. Recollecting the incident, the superintendent started to investigate the matter with the result that the company is now in the market again for Dixon's Silica-Graphite Paint. The following letter is reproduced with the thought that others interested in the protection of mining property would like to know something about what others think of Dixon's Silica-Graphite Paint:

VINTON COLLIERY COMPANY,
VINTONDALE, PA.

June 10, 1913.

*Joseph Dixon Crucible Company,
Jersey City N. J.*

GENTLEMEN:—About two years ago we purchased from you some Silica-Graphite Paint which was used for painting our steel tipples, and gave excellent results. In a short time we will be in the market for a paint for the purpose of painting stacks. Kindly advise if you have any paint of the same nature that would be suitable for this purpose, together with price.

Very truly yours,
(Signed) T. W. HAMILTON,
Superintendent.

FLAKE GRAPHITE IN BOILERS

A correspondent asks us if it is necessary to separate or otherwise eliminate flake graphite which may leave the cylinder with the exhaust steam and pass into the boiler with the feed water? We have advised our correspondent that it is not necessary, as flake graphite in a boiler is especially useful in preventing the formation of scale, and in fact it is useful for loosening the old scale.

All feed water contains scale-forming salts, and flake graphite will combine with the scale to make it softer and more easily crumbled. No other form of graphite will answer as

well as fine flake, as other forms contain more or less clay.

Mr. Frank Wulffen wrote in the March, 1909, issue of *Power and The Engineer*, as follows:

"One of the jobs I had in my earlier experiences was that of boiler washer in a plant containing six 250 horsepower water-tube boilers. These boilers were washed out every six weeks. When I closed up a clean boiler, I put two pounds of flake graphite in each drum.

"When a boiler was opened up after this treatment, and the turbine cleaner run through the tubes, the scale came off very readily. By examining the side of scale which was next the tube, graphite could be seen clinging to it. The same condition was found existing in the drums.

"Since I received my license and had charge of boilers, I have used this same idea and find it works fine, especially in return-tubular boilers, where the tubes are harder to clean."

HOTTER ELSEWHERE

In these scorching days of summer it may be well to recall what Mr. Camille Flammarion, the French astronomer, tells us of star temperatures.

Inhabitants of our torrid zones may very naturally think that our sun must be the hottest of heavenly bodies, but we are told that our sun is an iceberg when compared with certain centres of heat, in the flaming star Sirius and the star Gamma in the constellation Pegasus. The latter orb blazes with a temperature of more than sixty times as high as that of our sun.

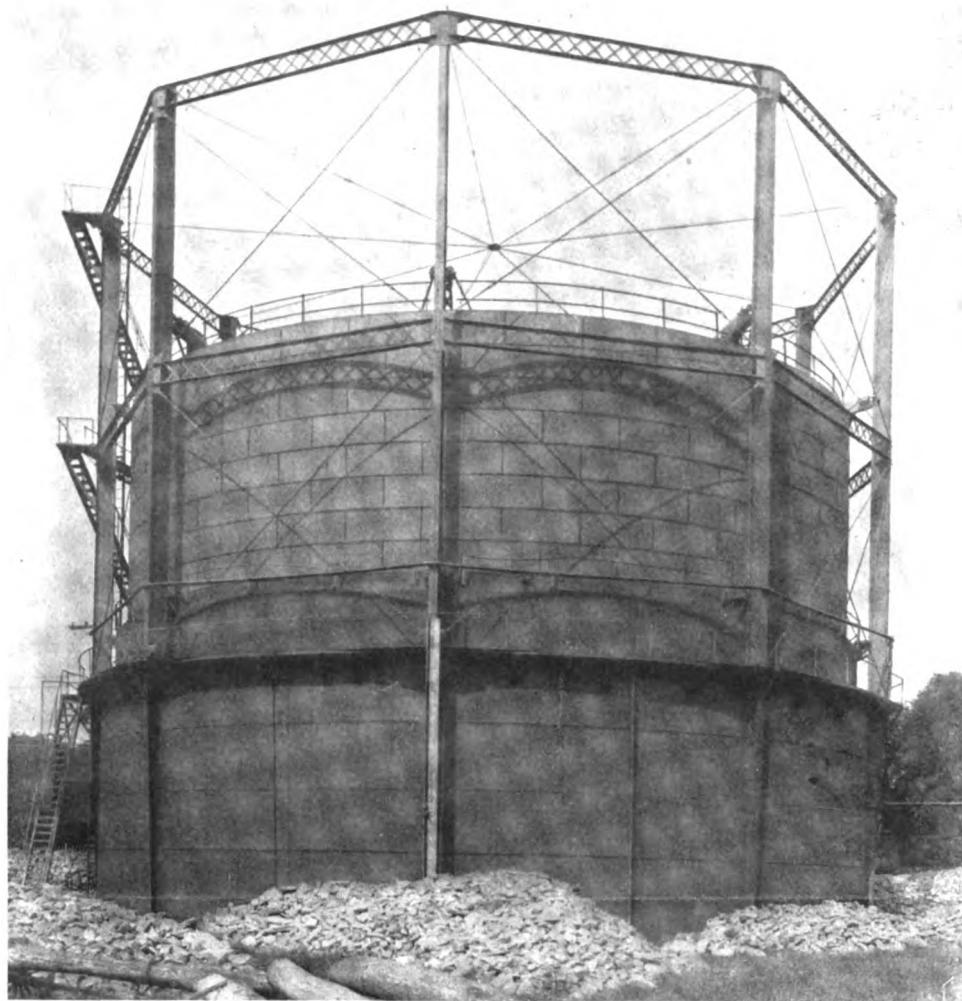
Let us console ourselves in the knowledge that these vast fiery spheres are so inconceivably remote from the earth that their warming power is virtually unfelt.

HOW PEARLS ORIGINATE

In the *Daily Consular Report* we read that "the life of a pearl oyster is not more than eight years, and from about its third year it seems to be more productive both in number and size of pearls. Very few three year old oysters contain anything larger than the seed pearls, but if a bed could be fished just as the oysters were dying off from old age, the pearls obtained would be many and large. The oyster attains its largest circumference at its fourth year, but thickens afterwards and increases in weight. True pearls, which are the results of a disease and not due to the admission of foreign matter into the shell, are formed in the intestines of the oyster, and when they reach a size to cause it great discomfort the bivalve either dies or forces the pearls toward the opening between the valves, where it is usually halted and retained, to increase in growth, by a transparent membrane. Very large pearls are rarely found on the Ceylon banks. A dead pearl loses its weight and becomes dullish brown in color. Diving bells were imported for the pearl fishery by Sir Edward Barnes in 1825, but neither they nor a European in diving dress can compete with the naked native."

POOR IKEY

"Don't fool, Ikey is a sick man," said a Hill dweller to Tom Reilly. "All the time he hollers mit one hand for ice water and mit the other hand for the doctor."—*Newark News*.



**GAS HOLDER OF THE UNITED ELECTRIC LIGHT
AND WATER CO., SOUTH NORWALK, CONN.**

Three years ago the gas holder owned by the United Electric Light and Water Company of South Norwalk, Conn., was painted with Dixon's Silica-Graphite Paint. Recent examination of this company's holder revealed the fact that Dixon's Paint is still giving the best protection possible, and from all indications the holder will not need to be painted for some time to come.

As a protective coating for gas holders, Dixon's Silica-Graphite Paint has received unqualified endorsement from gas company officials, and it is a remarkable testimonial to the durable qualities of Dixon's Paint that no dissatisfaction has ever occurred in connection with any of the hundreds of gas holders it protects. A copy of the Dixon booklet, "Gas Holder Painting," will be gladly sent upon request.

**DIXON'S BOILER GRAPHITE MAKES GOOD
THE MAGEE CARPET COMPANY**

BLOOMSBURG, PA., May 28, 1913.

*Joseph Dixon Crucible Company,
Jersey City, N. J.*

GENTLEMEN:—Regarding the tests we have made with the Dixon Flake Graphite, used for the purpose of prevention and

removal of scale in boilers, would state that we have had exceptionally good results from the use of this graphite, it having done all that you claimed it would do. We are extremely well satisfied with the results and will gladly give our experience in the use of boiler graphite to anyone referred to us.

Yours very respectfully,
MAGEE CARPET Co.,
W. HOFFMAN, M. M.

AN INDIGNANT citizen, who had just dodged three automobiles in quick succession, was heard freeing his mind at the four corners.

"Why," said he, "pretty soon the chauffeurs will be getting up a horn code for the pedestrians to commit to memory, something like this:

"One toot—Throw a quick back handspring for the sidewalk.

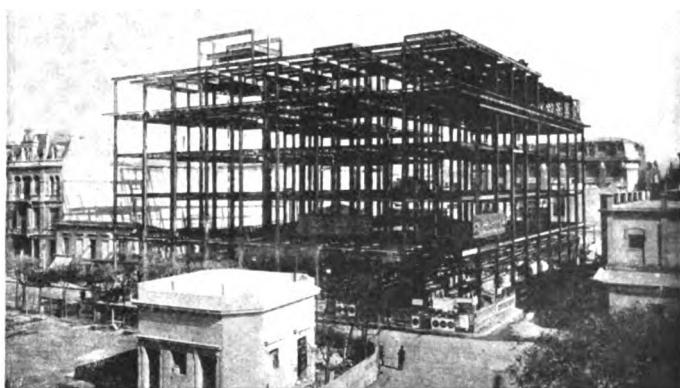
"Two toots—Dive over the car.

"Three toots—Lie down calmly; it is too late to escape, but we will go over you as easily as possible if you keep very still.

"One long and two short toots—Throw yourself forward and we will save both your arms.

"One short and two long toots—Throw yourself backward and one leg will be saved.

"Four toots—It's all up with you, but we promise to notify your family."—*New York Globe*.



NEW BUILDING OF AGAR, CROSS & COMPANY, BUENOS AIRES, SOUTH AMERICA

Buenos Aires, the thriving capital and metropolis of the Argentine Republic, is one of the great South American cities whose development is providing a wide market for both American and European exporters.

The great agricultural interests which helped to make Buenos Aires the metropolis of South America also brought prosperity to the firm of Agar, Cross & Company, importers and dealers in agricultural implements and machinery.

The new building which this firm recently erected, contains 750 tons of structural steel, all of which is protected from rust and decay by Dixon's Silica-Graphite Paint.

Reproduced above is the photograph of this building taken during the course of its construction. This structure, which is one of the notable buildings of Buenos Aires, was designed by Chambers & Thomas, Architects. R. W. Hunt & Co., Engineers, and the United States Steel Products Company, Contractors, were also connected with the construction of the Agar, Cross & Company's building.

The South American interests of the Dixon Company are represented at Buenos Aires, Calle Cangallo 666, by Mr. A. J. Eichler and our South American friends who are interested in protective paint, crucibles and graphite lubricants should communicate with Mr. Eichler, who is prepared to render prompt and efficient service.

Vacation time has come, hey-ho,
Boardwalks and funkeys and bills,
And many a man
Hocks what he can
And beats it down from the hills
To the salted sands where the tangos go,
And a square meal costs ten dollars or so,
Hey ho,
Yes, costs ten dollars or so!

A STORY TOLD BY A LEAD PENCIL

With the permission of Professor Colby, Principal of the Oyster Bay High School, the following essay, written by Miss Eleanor Summers, is reproduced from the school's 1913 annual:

The first I can remember about myself is that I was put in a box with some other pencils and set in a large window. I

could see the people passing by on the outside. Some stopped and looked in but others went right on. I lay there for about a week when one day the man came and took me out. He put me in the hands of a little girl. She handled me a little while and then gave me back to the man. Then I was put back in the box again. I suppose I didn't suit her.

About two weeks after that a man came into the store and looked around and when he saw me he came over and looked at me for awhile, then put me into his pocket and started to go. But the man in the store stopped him and took me away from him. I guess he was trying to steal me.

That same day another man came in and bought me. He took me home and gave me to his little girl. She took me and started to write at once. I could hear her saying five times five equals twenty-five and six times five equals thirty. When she got done with me she put me upon a shelf in among some papers. The next day her mother who was cleaning house, took the papers, and me with them, in the fire. The papers caught fire but I fell to the bottom of the stove and I am there yet.—ELEANOR SUMMERS.



SAM WANDEL

By Mr. Sam Mayer, Manager of the Chicago Branch of the Joseph Dixon Crucible Company.

The Chicago office has suffered a great loss. Sam, our head office boy, was drowned while on his vacation.

His death deserves something more than a passing mention. He was as fine as silk, a 100% boy, and he was destined to be more than the ordinary man; a loyal worker—time cut no figure with him—willing, obliging, of pleasing manner and a beautiful personality. Everyone in this office loved him.

He was one of seven—mostly babies. His father works in a very humble capacity. Sam, early in the game, realized that it was up to him to bring the family out of bondage, and he worked to this end and this end alone.

At fourteen he put his boyhood behind him. He meant to make good, and we were going to help him along. Every cent he earned went home. He would not spend a nickel on a picture show.

Sam died too early. He will be missed, for his life meant so much.

Most matured men might be proud to leave the record and memory left behind by this seventeen year old boy.

ON MAY 24, the 500,000th telephone was installed in New York City, which now has nearly as many telephones as London (235,000), Berlin (210,000), and Paris (92,000), combined.



LAKE VIEW BUILDING, CHICAGO, ILL.

In the center of the above illustration and in striking contrast with the structures on either side of it, stands the Lake View Building of Chicago.

The Lake View Building is located on one of the busiest thoroughfares of the Windy City, and as its name implies, commands a view of Lake Superior. The steel work contained in the Lake View building is protected with Dixon's Silica-Graphite Paint. This paint also protects the steel work of the Illinois Athletic Club Building, which is located next to the Lake View Building, and may be seen to the right in the above illustration.

The Lake View Building and the Illinois Athletic Club Building are only two of the many structures in Chicago upon which Dixon's Silica-Graphite Paint is used. Many other prominent Chicago buildings are listed in the Dixon booklet, "Notable Buildings," and nearly 150 of the largest cities in the country are represented. Copy of this booklet will be sent upon request, together with information regarding the superior protective qualities of Dixon's Silica-Graphite Paint.

As a knocker, Opportunity isn't so insistent as some of the other kinds.

EUTHANASIA

To THE EDITOR OF THE *Evening Sun*—Sir:

I am a small industry.

I am not favorably located.

I am tariff protected and therefore a "special interest."

I was welcomed in this community by the local Board of Trade.

They were proud of me. I was a little proud myself.

All of a sudden I see a change.

I fear I am to be an outcast.

I am not efficient. I cannot stand foreign competition.

I am to be investigated.

I am to be put out of business.

If not by the tariff reductions then by the Interstate Commerce Commission.

I have the only regular payroll in the village.

What of that?

I was induced to come here by the local interests.

What of that?

I pay full American wages.

What of that?

My workpeople have bought cottages and furnished their homes.

What of that?

I thought I had a right to count on protection by the tariff.

Mr. Wilson says no. I had the "stimulus of competition."

But I cannot compete with European wages.

Then I must die!

Mr. Redfield says so.

"Euthanasia."

Great is the "Mean Ways Committee."

—JOSEPH D. HOLMES.

SOME UNUSUAL USES OF GRAPHITE

Graphite for phonographic records.

Graphite for making hats.

Graphite for lace making.

Graphite for the bakery.

Graphite for making paint—not face paint, unless you are to take part in a minstrel show.

Graphite for polishing coffee.

Graphite for polishing tea.

Graphite for gall sores on horses.

Graphite for polishing powder.

Graphite for polishing shot.

Graphite for preventing the freezing of gun locks in the far arctic and antarctic regions.

Graphite for medicine.

Graphite for curing "sticking" or "squeaking" in anything or everything that has a tendency that way.

Graphite in place of talcum powder, if you don't mind the color, as it is infinitely better.

THE Marion Record of Kansas inflicts the following test for those who come home late from the club.

"A man named Woodbury Wood 'phoned to the woodman for a load of wood. The woodman knew that Wood wouldn't pay for the wood, so in a second's time he had to decide whether he would or wouldn't haul the wood to Wood."

PASSING THE WORD ALONG

For the purposes of this sketch let it suffice to say there are two kinds of advertising. First, the recommendations we get free by deserving them; second, the prestige you acquire as a result of truthful, judicious publicity which you pay for.

Neither should stand alone! Both are equally essential to broad success and should compliment each other in the daily up-building and expansion of any worthy business enterprise of today.

As partially illustrating the first above variety taken by itself, the Wizard of East Aurora in his famous theory, oftentimes mistakenly attributed to Emerson or Thoreau: "If a man preach a better sermon, write a better book, or build a better mouse-trap than his neighbor, though he hide himself in the wilderness, the world will make a beaten path to his door," is all right as far as it goes and like many another theory is but a poetic expression of a partial truth rather than a practical, well-rounded plan to create Twentieth Century demand.

In these intensive days, when results only talk, and in competitive markets at that, no man with an unknown but meritorious product to dispose of, will content himself nor can he afford to wait for the otherwise ideal Hubbard Squashion method of merit and recommendation alone to work out his marketing salvation for him.

He must needs employ from the very start the first injunction implied in the title of this effusion, "Pass the word along," for if the word be not passed along in advance of proving the product, so few possible users would ever know that the finest article on earth was being produced at the Hubbardonian retreat that there could be no worth while volume of recommendations available with which to boost the sale or introduction of even the best thing of its kind on earth.

No—the two above co-equally indispensable methods of introduction and popularizing should work together harmoniously all the time, each playing into the other's hand reciprocally.

While it is now, and ever shall be, a fact that the world constantly seeks for the best value it can buy in any line, it is equally true and important that what we say, as manufacturers, in advance about the superiority of the quality of our product by means of which we aim to excite curiosity, interest and desire in order to have same first investigated and then possessed, shall so correspond with the true merits of the goods themselves that the public, who are the best judges because they put the article to the final test of service, can say only one thing concerning us and our goods, viz: "He told the absolute truth about his product and after thorough trial I cannot say anything but praise of both."

In other words, by the use of these two methods of advertising, both wisely employed, we may add to the truth of A. T. Stewart's famed definition of what constitutes the best advertising, viz: "a satisfied customer," the equally vital truth that in order to originally reach that patron's attention we must first cause him to sit up and take notice, before he and a multitude of others like him can possibly reach the stage of the satisfied customer.

The cost of all productive advertising is one, if not invariably the most valuable, part of the selling expense of any business and should never be (as we have all too frequently seen it insistently and mistakenly regarded), as a quality sacrifice fund

which, misguided people assert, the buyer might just as well realize first as last—takes from the true value of the goods his money buys and provides instead for liberal advertising.

Of course, no man can at one and the same time put his money into advertising and put the same identical money into increased worth of his goods. Both should be systematically, separately and everlasting provided for, however, by suitable appropriation in any well ordered business institution. Here comes in the use of our title in its second sense. Any concern with an honest product to dispose of would do well to sum up this argument as follows and adopt as its motto: "Our purpose for now and for all the future is that by maintaining the high standard of its products this company is bound to receive gratuitous advertising from its satisfied patrons through 'passing the word along.'"

We are all the time consistent believers in the policy of using the selected press as also the direct appeal methods of advertising for the purpose of making our goods known to strangers. When the merits of these goods are once known we will take our chances in the future, as we have in the past, concerning their being generously and favorably talked about.

For those who have "passed the word along" in the past we extend a cordial vote of thanks.

Let everybody rely upon our putting the "maximum value into the goods."

Specify the DIXON brand of American goods made by American men. Patronize home industries because their products are liable to be the very best.

PRICE MAINTENANCE

It would be seen from the late decision of the United States Supreme Court that the maintenance of prices,—the fixing of prices at which the retailer shall sell to the consumer, or the fixing of prices at which the jobber shall sell to the dealer, cannot be maintained even on patented articles.

The United States Supreme Court decided, five to four, that the maker of a patented article loses control of the article on its sale and cannot dictate at what prices the purchaser may sell it. This epoch-making decision was wholly unexpected, especially as the Court seemed to decide otherwise in the Mimeo-graph case. This decision affects many stationery articles.

Arthur von Briesen, the New York attorney who represented Henry in the Dick *versus* Henry suit, states that the only remedy a manufacturer has, in his opinion, is to refuse to sell goods to a man who undersells the article.

As the decision of the United States Supreme Court, five to four, was so evenly divided, it may be that later on lawyers who may be in favor of a resale price can devise or discover some means of maintaining same. It has been pointed out, however, that the decision of the Supreme Court was a direct reversal of all former decisions by lower courts.

Congressman Oldfield of Arkansas, chairman of the House Committee on Patents, is quoted as saying: "The consumer has been forced to buy articles at comparatively exorbitant prices, because the manufacturer has held the club of the lower court's decisions over the head of the shopkeeper. The Supreme Court decision ends this reign of enforced inflated prices."

Printers' Ink for June 5 prints the decision fully and discusses the bearings of the decision upon the whole price maintenance fight.

GRAPHITE

VOL. XV.

SEPTEMBER, 1913.

No. 9.

Issued in the interest of Dixon's Graphite Productions, and for the purpose of establishing a better understanding in regard to the different forms of Graphite and their respective uses.

ONE PENCIL AND TWO SERMONS

There be "tongues in trees, books in the running brooks and sermons in stones"—and here are two sermons in a pencil, the preacher being a saleswoman who also practically demonstrates salesmanship in a Topeka stationery store, where a Paint Man sought a pencil. "Here is the best one we can get—we put our name on it, see?" And there it was—"Hale's."

The Paint Man had been arguing a half hour before with a committee of legislators on the futility of a bill to require the formula on the paint can; and he had attempted to persuade them that such legislation, by magnifying the value of the mere formula and minimizing the value of the brand or trademark or manufacturer's or

dealer's name, struck at the very base of business probity and ethics and of what has always been and always must be the buyer's chief protection, viz., the seller's sense of personal responsibility. He tried to show that though stringent methods should be employed to punish deliberate deceivers, every possible effort should be extended to develop and to protect and to reward that sense of personal responsibility for one's products or service that is the bulwark of the business world. But he felt that he had not made his point clear; that they thought it a far-fetched abstract generalization not fitting the prosaic matter in mind, the selling of paint.

But this saleswoman furnished the concrete example, of a concern proud of its goods, making that pride a protection to its customers, and instilling similar pride into its sales force as a stimulus to salesmanship.

The second sermon? This more concrete, direct salesmanship—"Better take a half-dozen for a quarter. A man is always wishing for a good pencil—yes, and for pins—and when he does go out to buy either he ought to get plenty." This was decidedly interesting, and the Paint Man waited for more, for the "clincher"—"And I'll sharpen a half-dozen in a half-minute."

She sold, and sharpened, a dozen of them, and each was given to a Kansas solon, with appropriate remarks by the Paint Man.

And then they saw the point.

—*American Paint and Oil Dealer.*



CULTIVATING LATIN AMERICA

Germany—through the German South American Institute, which was founded in the latter part of 1912 for the purpose of cementing intellectual, scientific and economic ties between Germany and the Latin American republics—is making great progress, according to a special cable from Berlin to the *New York Times*.

Leading bodies of Brazil, Argentina, Chile, Peru, and other countries have declared themselves in sympathy with the movement and are prepared to consider themselves official branches of the parent organization for co-operative work.

It is a wonder to those who have given careful study to the growth of South America, and especially to those who have visited South America, that so few manufacturers in the United States are interesting themselves in South American trade. It is self-evident that manufacturers either do not comprehend the possibilities of South America, or have an exaggerated idea of the size of the United States and the possibilities of trade expansion in their own country.

When you say to an American manufacturer that Brazil alone is so big that you can put within its confines the United States and yet have room for the entire German Empire, he looks upon you as one who has neglected the study of his geography.

SEEING LAKE SUPERIOR FROM CHICAGO

Several readers of GRAPHITE have called our attention to our statement in August GRAPHITE about the Lake View Building in Chicago, wherein we said that "the Lake View Building is located on one of the busiest thoroughfares of the Windy City, and as its name implies, commands a view of Lake Superior." We did not consider it necessary to say that it commanded a view of Lake Michigan. Lake Michigan can be seen from almost any building, but to see Lake Superior, the building must be painted with Dixon's Silica-Graphite Paint, and it must be a building that "commands a view of Lake Superior."

We have been asked why we did not say that the Lake View Building commanded a view of St. Louis, and that on Sunday you could see the citizens of St. Louis crossing the bridge over to East St. Louis to quench their thirst. We did not care to say that as we were writing about lake views.

THERE are many things which eulogize the supremacy of Nature. The most interesting of them, we think, is graphite. For eighty-six years the infinite variety of its uses has never failed to excite our wonder.

September, 1913.

ESTABLISHED 1827



INCORPORATED 1868



JOSEPH DIXON CRUCIBLE CO.

JERSEY CITY, N. J., U. S. A.

**Miners, Importers and Manufacturers of Graphite,
Plumbago, Black Lead.**

OFFICERS:

President—GEORGE T. SMITH*Vice President*—GEORGE E. LONG*Secretary*—HARRY DAILEY*Treasurer*—J. H. SCHERMERHORN*Ass't Sec'y & Ass't Treas.*—ALBERT NORRIS

DIRECTORS:

GEORGE T. SMITH

GEORGE E. LONG

WILLIAM MURRAY

EDWARD L. YOUNG

WILLIAM G. BUMSTED

HARRY DAILEY

J. H. SCHERMERHORN

OFFICES AND SALESROOMS:

NEW YORK SALESROOM, 68 Reade Street.

PHILADELPHIA SALESROOM, 1020 Arch Street.

SAN FRANCISCO SALESROOM, 155 Second Street.

CHICAGO OFFICE, 1324 Monadnock Block.

BOSTON OFFICE, 347 John Hancock Building.

PITTSBURGH OFFICE, Wabash Terminal Building.

ST. LOUIS OFFICE, 501 Victoria Building.

BALTIMORE OFFICE, 1005 Union Trust Building.

BUFFALO OFFICE, 72 Erie County Savings Bank Building.

ATLANTA OFFICE, Fourth National Bank Building.

EUROPEAN AGENTS,

Graphite Products, Ltd., 218-220 Queen's Road, Battersea, London.

THE THREE COMMERCIAL RIVALS

The year 1912 was a period of great prosperity for the greater part of the civilized world. The volume of export trade of the United States, the United Kingdom and Germany is strong evidence of this fact. In the five years which have elapsed since the financial troubles of 1907 there has been a rapid advancement in the export business of the three countries. It is interesting to note that the total values of the export trade of the United States and the United Kingdom were very nearly the same in 1908 and that five years later (in 1912) they were still very nearly the same, the United Kingdom being slightly in the lead, and that both countries in that time increased their export trade by over \$500,000,000, the United States increase being \$528,000,000, and that of the United Kingdom \$534,000,000. Germany is still considerably behind both countries in the total value of its export trade, but made

a somewhat greater gain in the five year period, its increase being \$587,000,000. In manufactured goods, or partly manufactured goods, however, the German increase was considerably less than that of the United Kingdom.

Of the United States exports, manufactured and partly manufactured goods formed over forty-seven per cent. of the total in 1912 against forty-one per cent. in 1908; the British exports were seventy-nine per cent. in 1912 and very nearly the same in 1908; while the German exports of these classes of goods in 1912 were about sixty-five per cent. of the total against about sixty-seven per cent. in 1908.

A SACRILEGIOUS SIGNATURE

The phrase "Made in Jersey City" is used upon all the advertising and printed matter of the Dixon Company. It thus happened that two Dixonites were recently discussing the subject and the question arose of how one should register at hotels while away from the city. Our Mr. G. H. Reed of the School Department said that he always registered Jersey City after his name. It seems, however, that he had formed the habit of abbreviating his home town to "J. C." Upon one occasion, years ago, while in line with several other drummers, he was in an amusing way called to account for this concise way of registering. Two or three "Knights of the Grip" had registered "N. Y." after their signatures and as usual Mr. Reed followed with his "J. C." upon which the man behind him who had examined Mr. Reed's signature before writing his own, turned to the Dixonite and said: "It seems to me that you are rather sacrilegious as well as egotistical." After thinking the matter over for a moment Mr. Reed came to the conclusion that the stranger was right.

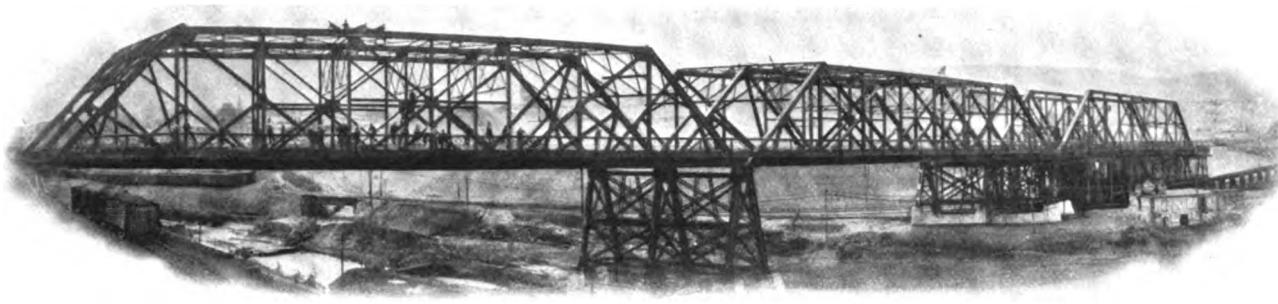
"NO COURT CAN TELL ME WHAT TO DO"

Two men, held on charge of swindling, had escaped from the detectives in Florida by forfeiting their bond when they heard of the unfavorable decision of the court. On being located and arrested again in South Carolina, they tried the same scheme and things looked very dark for the detectives. The lawyers of the alleged swindlers appealed to Judge Devore of the Charleston Circuit Court for a writ of habeas corpus. In despair McKenna and Gegan appealed to Governor Blease, who, on Saturday morning, held a hearing in his chambers at Columbia. Governor Blease said that the extradition papers signed by Governor Sulzer were the most complete and satisfying he had ever seen. Also, he was correspondingly unimpressed with the two prisoners. He said he would sign the papers. He picked up his pen. There was immediate hubbub. He was told that the court had just granted a writ of habeas corpus.

"What of it?" said the Governor. "No court can tell me what to do."

Then he wrote his signature with an extra flourish and surrendered the prisoners to the highly delighted New York detectives. Furthermore, he advised them to lose no time in crossing the state line into North Carolina, beyond the reach of the court.

Real justice and good common sense law is sometimes superior to statute law, which, too often, permits the guilty to escape.



RECORD OF LONG SERVICE

HIGH BRIDGE, CLINTON, IOWA

We illustrate the High Bridge of the Clinton & Illinois Bridge Company over the Mississippi River at Clinton, Iowa. The bridge is one and one-eighth miles long and was painted in 1904 with Dixon's Silica-Graphite Paint. Although nearly ten years have elapsed since repainting, Mr. C. C. Coan, Chairman of the Executive Committee, writes us that the structure is not yet in need of repainting.

Mr. Coan is only one of hundreds who have given us similar testimony of the long service of Dixon's Silica-Graphite Paint. Without question Dixon's Silica-Graphite Paint seems to be the greatest paint known for economy in labor and material. The paint on the Clinton Bridge is subject to the trying conditions of weather, gases, smoke, acids, brine, dampness, cold, heat, etc.

THE INCOME TAX

The New York Sun says that an income tax, according to American principles, and truly democratic principles, would be a tax on all incomes large enough to warrant the cost of collection, that consideration alone determining the maximum of exception. It would be a tax at a uniform rate for all sizes of income, putting upon each contributor his proportionate and equitable share, whether it was \$10.00 or \$1,000,000 a year. Any other sort of income tax is not American and is not democratic.

OVER THE GREAT WHITE WAY

Col. William Frederick Cody, known to every boy in the country as "Buffalo Bill," in a late interview in New York said that he had been in cattle stampedes when it was as much as a man's life was worth to have his pony put a foot in a prairie dog's hole, and that he had been in innumerable fights, but that he considered the crossing at Broadway at 42nd Street his most exciting experience in recent years.

He said that for about eleven minutes he waited on the sidewalk before making the attempt to cross from the east to the west side of Broadway. At the end of that time he took his wife by the arm and made a blind rush through the traffic. He said he never felt more uncertain of the outcome of an adventure than he did about the time he reached the middle of the street. At that moment he heard a whistle blow. He didn't know whether it was a signal to the taxi drivers to stop the slaughter of pedestrians or not, but, strange enough, he suddenly found his way to the sidewalk.

HAPPINESS

From a Mathematical (Technical) Point of View

By A. RATNER, Engineer in St. Petersburg*

It is difficult to answer the question what is happiness or luckiness. There are many people who endeavor to achieve this ideal state without knowing what it really signifies. The following, we hope, will be of some interest for those who wish to have a clearer idea of that human state, which for a better term we call happiness or luckiness. New material as well as new spiritual desires are continuously springing up in our lives, and the more of them that are satisfied, the more happy or lucky we feel.

Let D-s represent the number of the desires that have at this moment been satisfied, and D-a—the quantity of all the desires that have been borne in our mind; we can then say that the relation or refraction

$$\frac{D-s}{D-a}$$

represents our state of happiness. Very interesting indeed are the conclusions we can draw from such a commentary.

Naturally when the numerator D-s is equal to the denominator D-a, we feel most happy, as all our desires are satisfied, but such a state can last only a moment, because the conditions of our human life are such that each moment new desires must spring up; otherwise we are not alive, we are dead. Only a moment, therefore, can we have the feeling of luckiness and must struggle again to satisfy the new wishes.

A fraction can be made greater by two ways: by increasing the numerator or by decreasing the denominator. In our practical life there are also situations in which we sometimes follow the first and sometimes the second way.

There are strong men who are able to work and who fearlessly struggle for satisfying their wishes—the more the better. On the other hand, there are feeble creatures who cannot struggle for increasing their numerator, their D-s, and must therefore limit their desires, that is, decrease their denominator D-a. The relation or the co-efficient of happiness (if we can say so) $D-s \div D-a$, can be made by this way greater, though the D-s is very small. This is the difference between the ascetics and the cheerful men.

We wish our readers to use more often the first way and not the second, though there are positions where the latter is unavoidable.

*Mr. Ratner is an American and regularly receives the Dixon house organ GRAPHITE. He tells us that he reads it with pleasure and suggests that we may like to print, as we do, something from his own pen.—DIXON

GRAPHITE FOR BOILERS

Not a New Thing, but Something Advocated by Dixon a Quarter of a Century Ago

In reading the advertisements and circulars of some of our good friends who are in the graphite business, one would think that the use of graphite for the prevention of boiler scale was something entirely new. In fact, one of our friends in the graphite business claims to have discovered it, and in a letter lately took us to task because we had advertised that the Dixon Company was prepared to furnish any kind of graphite required for use in boilers, whether the amorphous or the flake, but advocated the use of flake graphite.

While we are not at liberty to publish the names (yet we should be very glad to furnish the same to any one), we want to say to our readers that the secretary and treasurer of one of the large flouring mills in New York State wrote to an old established and probably one of the best known engineering papers in New York City, saying that as subscribers to that paper for their engineer, they would like to be advised what the editor of that paper thought about graphite in boilers.

To this inquiry the editor replied as follows:—

"The efficacy of graphite as a boiler scale resolvent was discussed in ——— eighteen or twenty years ago and has been alluded to repeatedly since. Of late years its use has become quite common and many of our contributors and correspondents have had excellent results with it.

"We have seen great sheets of scale, said to have been removed by its use. In any event, it ought to be perfectly harmless and a very inexpensive experiment to try."

As it has been said that doctors seldom take their own medicines, we want to further add that the Dixon Company takes its own medicine. It has experimented with the different kinds of graphite and has found flake graphite to be the most useful, as it should be, for the process is simply a mechanical one and not a chemical one. Flake graphite being entirely free from alumina or clay, there is no liability of any balling up of the graphite, or of carrying into the boiler any material that will serve to add to the scale in any way.

HIGH BUILDINGS

We read in the daily paper that the modern skyscraper had its prototype in the design of a Frenchman made in 1601. A book has just been discovered in a Paris library which was written by the architect Jacques Perret of Chambery in 1601, in which there is a design of a suggestive twelve story building which does not look unlike the New York Life Building in Broadway, New York.

Mr. Perret of course did not foresee the use of iron and steel, so he designed his bottom walls ten feet thick. If a Frenchman first suggested the possibility of the modern skyscraper, it was an American who first made the idea practical in iron, the Tower Building of Broadway being the first structure of the kind put up in America so far as we can learn.

It has been said that a fourteen story building is the one that pays best.

CONSIDERING the present style of women's dress a Boston minister suggests that men should wear blinders or the women should wear veils.

GRAPHITE

BASEBALL NEWS

The Game opened with Molasses at the stick. Smallpox was catching. Cigar was in the box and had plenty of Smoke. Horn was playing first base and Fiddle was playing second. Corn was in the field. Apple was umpire. When Ax came to bat he chopped one and make a Cakewalk and Sawdust filled the bags. Song made a hit and Twenty made a score. Every foot of ground kicked and they said Apple was rotten. Balloon started to pitch but went up in the air. Then Cherry tried it but was wild. When Spider caught the Fly the crowd cheered. Needle tried to Umpire. He was shary enough but had only one eye. Ice kept cool until he was hit by a pitched ball, then you should have heard Ice Cream. Cabbage had a good head and kept quiet. Grass covered lots of ground in the field. Organ refused to play. Hornet stung the ball but it fell into the hands of Clock. Bread loafed around until they put him out. In the fifth inning Wind blowed around what he could do and Hammer began to knock, then the trees began to leave. Knife was put out for cutting first base. The crowd roasted Peanut all through the game, and everybody kicked when they put Light out. Then Meat was put out at the plate. The score was 1 to 0 and the game was over. Door said that if he had pitched he would have shut them out. There was a lot of betting on the game and Soap cleaned up, but Eggs went broke.

—*Inland Stationer.*

THINK SUCCESS

Think success, dream success, live success. Concentrate on one thing—success. Do not try to do two things at one time. Do not try to work your hand intelligently while your tongue is wagging on gossip. Talk to your associates after the whistle blows. The malcontent will tell you to talk all you like, for this is your American right; and it is. But if you follow the advice of the croaker, the jealous complainer, you will find your promotion will be delayed, and your pay envelope contain the same amount of currency year after year.

"WHAT, WHEN AND WHERE"

When a cub reporter starts in he is usually told to mind the three W's, and to record what happened; when it happened and where it happened. Somewhat akin to this is Stuart Dean's advise in the *Iron Age*. He tells us the advertiser should keep in mind four essentials of an advertisement—the firm's name; the location of the firm, the class of goods made or sold, and why they are more desirable.

THE HELLICAN

C. M. Marshton, of the editorial staff of *The Chicago Record-Herald*, has just returned to the Windy City after spending the winter in St. Petersburg, Florida. Before leaving for the north, however, he perpetrated the following limerick, his inspiration being the Florida pelican:

A gorgeous bird is the pelican,
Whose bill will hold more than his bellican.
He can put in his beak
Food enough for a week;
But I'm d—— if I see how in hellican.

—*The Times of Cuba.*

CONCERNING GRAPHITE IN BOILERS

Mr. E. Rammelmeyer, of Salt Lake City, who has used Dixon's Boiler Graphite, contributes his experience in that connection to the *Practical Engineer* as follows, with permission to the Dixon Company to quote his words in GRAPHITE.

"I should like to say a few words in regard to graphite for boilers. I was engineer at a mine whose plant was equipped with three horizontal boilers, two sixty horsepower and one eighty horsepower. The water, although clear, deposited large quantities of scale and mud resembling chalk, finely pulverized.

"Eight days was the maximum time without cleaning the boilers and ten days meant blisters, and they all showed it. The flues were choked until there was hardly more than $\frac{1}{4}$ inch between them. First I cleaned one boiler, neglecting the flues, and after washing out thoroughly, threw in a double handful of flake graphite, put in the head and filled the boiler with water, with the idea of cutting it in the following morning.

"Everything went all right until noon the next day, when the water in the glass began to get muddy. By night I was so thoroughly frightened that I cut the boiler out, drained the water and knocked in the head. There was about four inches of loose scale on the crownsheet and the bottom of each flue was clean. The rest of the scale came off as soon as it was pushed loose from the top of the flues. Outside of reaming a few flues no further repairs were necessary. After that I would always throw in about $\frac{1}{4}$ of a pint of graphite every time each boiler was cleaned, and with lots of blowing down we could run fifteen days without cleaning."

HARD ON THE BLUE

The new cook who had come into the household during the holidays asked her mistress: "Where ban your son? I not seeing him around no more."

"My son," replied the mistress proudly, "Oh, he has gone back to Yale. He could only get away long enough to stay until New Year's Day, you see. But I miss him dreadfully."

"Yas, I knowing yoost how you feel. My broder he ban in jail sax times since Thanksgiving."—*Ad League Bulletin*.

GOOD ADVICE

If you have frequent fainting spells, accompanied by chills, cramps, corns, bunions, chilblains, epilepsy and jaundice, it is a sign that you are not well, but liable to die any minute. Pay your subscription in advance and thus make yourself solid for a good obituary notice.—*Mountain Echo*.

"Unto those who talk and talk
This proverb should appeal:
The steam that blows the whistle
Will never turn a wheel."—*Exchange*.

Unto those who talk and talk
This proverb should appeal:
The force that blows the whistle
Is the force that turns the wheel.

SHE was nearing the big front door of the Dixon office when she was seen to reel and fall by a quartette of Dixon men returning from lunch. It fell to the luck of a good looking and polite young man from our Boston branch to pick her up.

"Have you vertigo?" he inquired anxiously.

"Oh, no," she replied sweetly, "only just around the corner."

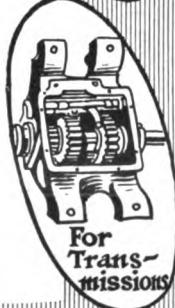
Then he saw a banana peeling on the sidewalk and understood the cause of the tumble. But he didn't understand her remark anymore than she did his.

The Ideal Lubricant



The microscope proves that friction is caused by minute irregularities on the bearing surfaces. Dixon's Motor Graphite covers this power-wasting roughness with a thin veneer of marvelous smoothness and durability.

This veneer actually holds the metal surfaces apart, reducing friction and lost power. Unlike a film of oil or grease, it cannot break down or change under heat or cold. This is why bearings cannot cut, bind or run hot when lubricated with Dixon's Motor Graphite—a pure, thin, tough, unctuous flake graphite of unusual lubricating qualities.



DIXON'S MOTOR GRAPHITE
(Pulverized Flake)

Mix it with your own choice of lubricants, or we will do it for you, as we manufacture a full line of greases containing Dixon's Motor Graphite.

Ask your dealer for Dixon's Graphite Lubricant No. 677—a highest quality mineral grease combined scientifically with Dixon's Motor Graphite. Fine for differentials and transmissions. More economical than plain oil or grease.

For real help on the lubricating problem read our FREE booklet, "Lubricating the Motor." Send name and model of car.

JOSEPH DIXON CRUCIBLE COMPANY
Established in 1827

 Jersey City N. J.






Foundry Crew at the Columbia Tool Steel Company, showing Furnaces and Molds. Reading from left to right are: John L. Bricks, Molder; Dan C. Pritchard, Melter; West Billigen, Puller Out; W. J. McCarthy, Puller Out; Felix Lavery, Gas Maker; Ernie McClintock, Melter, and W. J. Mathews, Superintendent.

COLUMBIA BOYS MAKE RECORD CRUCIBLE FURNACE RUN

Keep Furnace in Operation for Nearly Four Years

"Furnace No. 2 in the crucible steel plant of the Columbia Tool Steel Company, Chicago Heights, Ill.," says *The Foundry*, "has made a wonderful record for continuous operations. The first heat was made July 13, 1909, and six heats a day, except Sundays and holidays, have been made regularly to April 24, this year, a period of three years, nine months and eleven days. During this period the furnace melted 6,290 heats, refining 9,435 tons of tool steel. This plant contains two thirty pot crucible furnaces in charge of W. J. Mathews, melter. Notwithstanding this continuous run, the furnace is in fair condition, although several new tops have been added, due to the wear resulting from dragging the pots over the top layer of bricks and on January 18, this year, a new middle wall was built. However, no other repairs have been made.

"In design and construction, these furnaces differ somewhat from those employed in the Pittsburgh district. Owing to the recurrent spring floods, the crucible furnaces in that section of the country have been built largely above the ground, out of reach of high water. The furnaces in the plant of the Columbia Tool Steel Company, on the other hand, are built largely in the ground, and the melting floor is only thirty-one inches above the floor level. This type of construction undoubtedly insures a more uniform distribution of heat throughout the furnace and expansion and contraction arising from the cooling of the exterior are reduced to the minimum.

"These furnaces were built in a foundation of concrete, twelve inches thick, which eliminated any danger from settling. The partition wall between the gas and air tunnels is eighteen inches thick, thereby preventing leakage, although these

tunnels generally are only twelve inches in thickness. Throughout this period the fire brick was almost continuously subjected to a temperature of 3,000 degrees Fahr. When this type of furnace was first introduced in the United States, a run of four or five weeks was considered satisfactory and when this was increased to four or five months, it was believed that a record had been established."

In the accompanying illustrations Mr. Mathews and his husky crew are ready to start after another record. In the background of the larger picture may be seen the furnaces. In the foreground are the molds through which the molten metal from Dixon Crucibles are poured.

GRAPHITE TO ASSIST VALVE ACTION

One of the many uses we have recommended for Dixon's Motor Graphite is set forth in the following clipping from the *Motor World*:

A practice that is said by some repairmen to be beneficial is that of putting a sort of final polish on valves, after grinding, with graphite. After the grinding has been completed and all the oil and grinding compound thoroughly washed off, the valve seat is sprinkled well with dry graphite and the valve is worked on its seat just as in grinding. The result is said to be that the surfaces resist wear longer and retain their tightness better than without the graphite finish.

RHACHIRRHEUMA means lumbago, not plumbago. If it did and we had to pronounce it, we would still more strongly insist that graphite is the proper name for plumbago. The words "plumbago" and "black lead" are misnomers for graphite.



Foundry Crew at the Columbia Tool Steel Company. Reading from left to right are: George Michaels, Gas Maker; West Billigen, Puller Out; Ernie McClintock, Melter; W. J. Mathews, Superintendent, and Howard B. Mathews, Puller Out.

THE GRADING OF A LEAD PENCIL

Meaning the Degree of Hardness of the Lead

We have received a very interesting communication from one who is evidently not only a friend of the Dixon pencils, but also a strong believer in American productions. He takes us to task because we have not more strongly pushed the sale of the Dixon pencils in the West and in Mexico. He writes as follows:

"I know of several companies employing thousands of men, where all office men, clerks and timekeepers insist on being furnished with Koh-i-noor Pencils. This is all rot, because forty-nine men out of fifty cannot, unless the grade is marked plainly, tell by using it within three degrees of the correct hardness of any certain lead.

"Probably you are not seeking these, but I think if you should go after the purchasing departments of these large offices who use thousands of dollars worth of pencils a year and convince them that they, by buying the foreign make, are spending about twice as much as what they would by buying Dixon's, you would find your business growing here in the West and in Mexico. And mind this, at least seventy-five per cent of the Koh-i-noors used in Mexico are purchased from dealers in the United States and two duties have been paid. Koh-i-noors retail at twenty-five cents Mexican or twelve and one-half cents gold all over Mexico.

"I have had ten years experience in engineering work and have been connected with many companies, and know that the Koh-i-noor Pencil has as a pencil for draftsmen and engineers twenty times the sale that your pencils have. The companies do not want to buy Koh-i-noor Pencils, but the engineer employees insist that no other pencil will do the work as well."

The National Engineer for May has an article headed "Engineering a Typewriter—Somewhat of a Care, of course, But Comforting Withal." Not knowing just where further reading of the article might lead us, those interested may look it up for themselves.

THE SENSITIVE MAN

George Fitch, the well known humorist, draws a very clever picture of the sensitive man, from which the following is taken:

"A sensitive man is a man who can be almost fatally injured by a rude word. Some other people need an ax.

"A sneer will go clear through his breastbone, uncouple his ribs and put great, cruel dents in his spine. The man with the thick, calloused nature only grins when an opponent is stabbing him with a personal remark.

"The sensitive man not only suffers frightfully from words, but neglect is fatal to him. The lily of the garden does not fade without water as quickly as the sensitive man without attention. The world is full of timid, grief-stricken men who are hunting obscure and close fitting holes in which to die because they have been left off the reception committees or have been passed over in the newspapers or have been given a careless nod instead of a handshake by some friend.

"However, such men are generally sensitive because they are too passionately devoted to themselves. When you hurt a sensitive man you hurt the dearest thing on earth to him and the thing for which he has the greatest consideration."

OR PERHAPS IN SOME OTHER CITIES

A New Yorker had occasion to phone from one suburb to another while visiting in a Western city. Upon asking what the charge was he was told fifty cents.

"Fifty cents! For that distance? Great Scott! In New York you can call hell up for fifty cents."

"Possibly," coolly answerd the operator. "It's in the city limits."—*Hardware World*.

ONE OF OUR customers write us as follows:

"I expect to send a check in a few days. I thank you very much for your leniency. I am sober but money is tight."

DIXON's graphite publications sent free upon request.

HOW SHE USES DIXON'S COLORED CRAYONS
Subjects and Colors for Each Month of the Year Help This Little Maid to While Away the Time

"What are you doing, my dear little maid?"
 "Drawing some pictures, kind sir," she said.
 "And what do you draw with, dear little maid?"
 "With Dixon's Fine Pencils, of course sir," she said.
 "And why do you use them, my dear little maid?"
 "Because they are lasting, kind sir," she said.
 "And have you all colors, my dear little maid?"
 "Count them and see, sir," was all that she said.
 "And what are your pictures, my dear little maid?"
 "Listen, I'll explain them, kind sir," she said.

JANUARY

"In New Year's month there's white, brown, blue;
 For bare trees, snow and bright sky too."

FEBRUARY

"St. Valentine's month's the same," she said,
 "With boys and girls and a new red sled."

MARCH

"March gets warmer and melts some snow,
 So I make little spots of green grass, you know."

APRIL

"In April the crocuses, purple and gold,
 And sweet pansy faces unfold and unfold."

MAY

"In May there's a party; we dance hip-to-hops,
 And we all wear daisies and pink clover tops."

JUNE

"For June we have strawberries, big, red and fat;
 And ice cream, too—but I can't paint that."

JULY

"With crackers and flags and striped candy—my!
 Most all the colors are used in July."

AUGUST

"In August I like to go barefoot and wade,
 So here's a nice brook with some ferns in the shade."

SEPTEMBER

"September is jolly; there's melons so big;
 And grapes! why, I eat like a little pig-wig."

OCTOBER

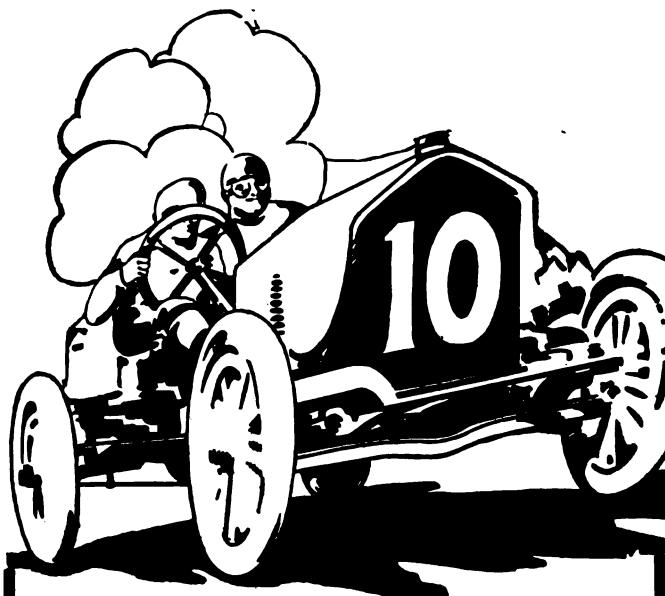
"I sharpen gay pencils, you see, for October;
 With Hallowe'en—maple leaves—nothing is sober."

NOVEMBER

"The grays and the browns I use for November—
 But Thanksgiving's in it, I always remember."

DECEMBER

"Then Christmas! Just look in your stockings and socks,
 And you'll find every color that comes in the box."
 "Will you answer me truly, my dear little maid?"
 "I never tell stories, kind sir," she said.
 "You really found every beautiful shade
 "In Dixon's Best Pencils, my dear little maid?"
 "Yes, really and truly, I did, sir," she said.



What Lubricant Does He Use?

This question is the average owner's unconscious acknowledgment of the skill and judgment required of the racing driver. Almost all speed kings use

Dixon's Transmission and Differential No. 677 Graphite Grease

because they have discovered it to be the finest lubricant made for transmission and differential gears. Fac-simile letters upon request. Ask your dealer or garage man for Dixon's Graphite Grease No. 677.

Joseph Dixon Crucible Co.

Established 1827

Jersey City, N. J.

VARIABLES IN COMMUTATION

The successful use of Dixon Graphite Brushes depends to some extent on the form and style of brush holder and on the amount of pressure to which the brushes are subjected.

In comparison with many makes of brushes the graphite brushes are soft, therefore the surfaces of the commutator on which they are to be used should be true and polished in order to insure uniform contact between the commutator and the brush.

The results of tests and observations made show that there are many variables, beside the brush itself, which enter the question of proper commutation. The vibration of the machines and the design of the brush holder are the most important variable elements.

As concerns the brush pressure it is impossible to set any arbitrary limits. Some engineers report the best satisfaction with low pressures, say about two pounds per brush, others find that for their machines the higher pressures, five or six pounds per brush or even more, are best used. Of course, high-speed machines will require more tension on the brushes than is necessary with machines of low speed, due to the greater vibration of the former.

It is, perhaps, well to advise as low a brush pressure as will give good results in any particular case, since the higher the pressure the more rapidly will the brush wear down. However, the lubricating qualities of the Dixon Graphite Brush prevent any damage to the commutator even with higher brush tension.

Any engineer can very quickly and conveniently test what pressure he is using by means of an ordinary spring balance. All that need be done is to hook the balance on the brush holder and lift until the brush clears the commutator. If the hook of the scale cannot be caught on the brush holder, a piece of ordinary cord can be passed around and caught on the hook of the balance. Nothing can be simpler, and every engineer should know what pressure he is using and if the pressures are uniform.

Sometimes, where neither carbon brushes nor graphite brushes alone give fully satisfactory service, a combination of the two has proved advantageous. Usually they are arranged so that there is a graphite brush alternating with a carbon brush. In this way the lubricating effect of Dixon's Graphite Brushes counteracts the objectionable grinding action of the carbon brushes.

We are always glad to place our experience at the disposal of any user of Dixon Graphite Brushes. Problems that may arise can be submitted to our electrical department, which will give personal attention to individual cases.

A DIPLOMAT

Lady—"You are the worst-looking tramp I ever saw!"

Soapy Sam—"Madam, it is the precincts of uncommon luvliness wot makes me look so 'orrible."

Lady—"Jane, give this poor man something to eat."

—*Sidney Bulletin.*

WE HAVE in the Dixon office some who call themselves card players, but when we asked them which card is never turned up trump in Euchre, none of them could tell.

HOW TO JUDGE

It is well said that while dress does not make the man, yet every man should endeavor to be well dressed. It is very much the same way with goods.

"When you have goods to buy of which you are not a judge," said a man of experience, "why not be guided by the manufacturer's private valuation of them?"

"How are you going to get it?" he was asked.

"Easily. For example, on underwear look at the buttons; on bottled stuff look at the corks; on canned goods look at the tins. No manufacturer uses cheap buttons, cheap corks or cheap tins for good articles. No manufacturer uses good buttons, good corks or good tins for worthless stuff. In the same way you can get the maker's private valuation of his wares in many other lines."

THE VALUE OF A GOOD SIGNATURE

The keystone of the German financial arch is credit; that is to say, a conviction upon which general practice is based, that there is no better form of financial security than a good signature.

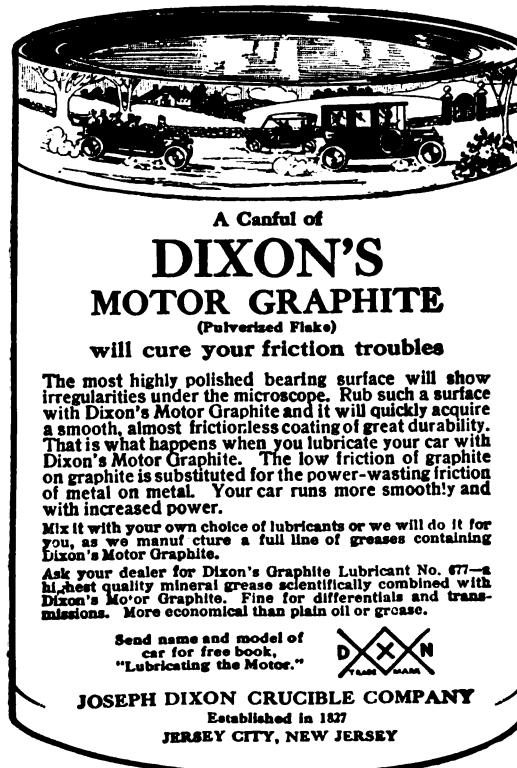
The time is coming when the products of a manufacturer will be judged by the value of his name. If his name has become synonymous with high quality goods—goods that are uniform and true to claims made, he need have no fear of loss of business or of dangerous competition.

The public will in turn learn that it pays to buy only such goods that bear an unquestioned name. The value of a good name is beyond computation and competition.

ALL-AROUND MAN

"Does he belong to the 400?"

"Yes, indeed; he's one of the ciphers!"—*New York Mail.*



DIXON'S GRAPHITE BRUSHES FOR COMMUTATORS

Suggestions by PROF. ALBERT F. GANZ

For the convenience of users of Dixon's Graphite Brushes we give the following summary of the conclusions deduced from tests and observations made by Professor Albert F. Ganz, of Stevens Institute of Technology.

1. Before Dixon's Graphite Brushes are applied to a machine the commutator must be given a true and polished surface. A rough commutator will quickly wear away graphite brushes.

2. No oil, vaseline or other lubricant must be used with Dixon's Graphite Brushes, but the commutator must be kept perfectly free and clean from such materials.

3. Don't soak Dixon's Brushes in oil or grease.

4. When a new graphite brush is inserted on a commutator, its surface should be fitted to the surface of the commutator by means of finest sand paper.

5. Sandpaper the contact surfaces and commutator occasionally, as the bearing surfaces of the brushes will take on a high glaze in time and may cause squealing.

6. The brush holder should be so constructed that the entire contact surface of the brush is touching the commutator and that the brush pressure is evenly distributed over the contact surface of the brush.

7. For slow-speed machines with little vibration the lower pressures will give satisfactory results, while for high-speed machines with considerable vibration the high pressures must be used. The pressure should always be as light as possible.

8. Where two or more brushes are used in parallel on one machine it is important that the brush pressure be the same for all brushes.

9. Motors, like children, require individual treatment. Some require more petting than others. One must study conditions carefully and adjust brushes accordingly.

SALEMEN'S CHAT

Anyone who doubts that the Dixon Graphite has been used for many years to make boiler scale removal easy and the beneficial results of same, will have all doubt set at rest by sending name and address to us, that we may furnish conclusive proof of the Dixon claims.

Be it remembered that the Dixon Company are importers and manufacturers of various forms of graphite from all parts of the world, including Germany, Corea, Mexico, Madagascar, Ceylon, Canada, etc. We can furnish whatever is wanted, but recommend, as superior to any other, Dixon's Finely Ground Ticonderoga Flake Graphite. There is a reason why.

GETTING "NO WHAR"

A great many men are like the old colored woman mentioned by the *Indianapolis News*, who was recounting her travels while she was scrubbing a floor.

"Ah was bo'n in Alabam' and went to Miss'sip. Then Ah went to Geo'gia and then to Tennessee. Ah forgets jes whar I went from theah, but Ah finally came tu Indianapolis.

"Ah guess Ah has been aroun' a lot, but Ah nevah seems to get no whar."

GRAPHITE LUBRICATING RODS

Dixon's Lubricating Rods are strong, gritless sticks of graphite material that are applicable to a large variety of uses. They are used as plungers in arc lamps, weighing scales, dash-pots, etc., as inserts in faces of friction clutches, as inserts in journals of "self-lubricating bearings," and in numerous other situations where oil or grease cannot be advantageously employed or conveniently applied. Heat and water do not affect them.

The rods are regularly made in any size up to 1½" diameter and 12" long. Larger diameters may be obtained in short lengths.

The material may be readily turned in a lathe to any form desired, in the same manner as cast iron. Rods are always furnished a trifle oversize so that the purchaser may machine them to accurate dimensions.

"Oilless bearings" are made by drilling holes in the journal and driving in graphite plugs; or the rods may be cast into the metal in the foundry and the journal afterward machined in the regular way. The fact that these rods lend themselves so readily to shop methods, make their range of application unlimited.

Write us concerning your problems and we will send samples and prices.

THE LAKE SHORE ELECTRIC RAILWAY CO.

FREMONT, OHIO, June 20, 1913.

Joseph Dixon Crucible Company,

Jersey City, N. J.

GENTLEMEN:—Referring to your communication of May 16, which was in reference to your Graphite Cup Grease No. 2 which we are using on our trolley wheels. We have been using this for the past four or five years for trolley lubrication.

We manufacture our own trolley wheels and they are so constructed that we have an extra large chamber for lubricant. We use a graphite bushing for a 5/8" pin 2" long only. We take the Graphite Cup Grease No. 2 and thin it slightly with oil, making it somewhat thinner in the winter than in the summer. This lubricant is then forced into the chamber of the wheel with a force pump in our shop and the wheel is then put into the harp attached to pole and is ready for service, and this is all the lubrication that is required for the life of the wheel. In the majority of cases we use the bushing over again on the second wheel. We have an air press for forcing these bushings in and out of wheel.

During the past sixteen years we have done considerable experimenting in trolley wheels and lubricants with different kinds of trolley wheels and different kinds of lubricants, and it has been our experience that the Dixon Graphite Cup Grease No. 2 is the very best lubricant that can be obtained for this purpose.

On trial equipments we have operated trolley wheels for seven and eight thousand miles; however, in figuring up our average mileage on trolley wheels by the year, taking into consideration wheels that are lost, broken and in some cases stolen, our average mileage is approximately 4000 miles.

Yours truly,

FRED. HECKLER,

Supt. M. P. & C.

RADIUM EXTRACTED IN AMERICA

Radium bearing ores have been sent from this country to have the radium extracted abroad, but never until this summer has radium been extracted here and sent out of America. Sometime ago a messenger, who is an employe of the Standard Chemical Company of Pittsburgh, Pa., was sent to Dr. Otto Brill, director of the Radium Research Laboratory of the Standard Company, who is now in Vienna, Austria, bearing 250 milligrams or one-quarter of a gram of radium. It resembles a white metal and was contained in a small nickel tube less than one inch in length. Its value was about \$30,000.

A specially prepared wrapper enveloped the tube because of the remarkable properties of the contents. It was too valuable to be sent by mail or parcel post, and so was sent by messenger. While the tube was small enough to be carried in a vest pocket it would not be safe to do so, because in a short time the strong substance probably would bore a hole in the body of the bearer. Hence it was tucked carefully away in a corner of a suitcase.

TEETH

If the question were suddenly asked, how many people could tell how many teeth they have? Not how many teeth that they possibly now have, but rather how many teeth did Nature intend them to have?

It may be interesting to know that the temporary teeth are twenty in number, ten upper and ten lower. They are known as incisors, cuspids and molars. They begin to come in from five to seven months after you are born, and keep on coming until you are about three years old.

The permanent teeth begin to come along when you are five to six years old, and all of them should be through by the time you are twenty-three years old, then you should have altogether twenty-four teeth, and to the three names mentioned above, you have added, what your dentist friend calls "bicuspids."

In the matter of toothache that may come any time during a life, but after you have cut all of your teeth, your toothache will largely be due to your own carelessness. While you are cutting your teeth it may be Nature's way of reminding you that you are getting a new tooth.

A CLEVER SALESMAN

The following is told by the local manager for a New York firm:

"Hearing a great deal of comment among his customers about the offerings of a prominent catalogue house, a small town merchant got a catalogue of the concern and advertised that he would place orders with that house for his trade without charge. One of his first customers for the rival house was a woman who ordered a shirtwaist priced at \$1.29. On delivery of the waist at his store the merchant called in the customer and then took from his stock a similar waist, better made, that he sold regularly for \$1.25. While the cost difference was small, the woman recognized the difference in values at once and afterward bought at home. Other cases of this kind, according to the gentleman, resulted in a material increase in the merchant's trade, and also helped other dealers of the town."

"ANTI-GRAFT" MARRIAGE

We read in the daily papers that the fear of taking graft is upon some of the ministers, even if that fear is not general at the present time. The Rev. Almer Pennewell of Chicago performed, so far as known, the first "anti-graft" marriage, after announcing that he believed fees accepted by ministers for officiating at weddings were nothing less than graft, and that in the future he would make no charge for that service. He also asserted that couples must "present clean bills of health from reputable physicians."

The father of the bride attempted to force a fee on the clergyman, but was unsuccessful.

THE MELTING POINTS OF FIRE BRICK

According to the United States Bureau of Standards, the melting points of fire bricks are as follows: The most common fire brick, or those made of clay, of which the main ingredient is kaolin, will melt at a temperature ranging from 2,831 to 3,137 deg. F.; bauxite brick, from 2,949 to 3,245 deg.; silica brick, from 3,092 to 3,101 deg.; chromite brick, at 3,722 deg., and magnesia brick, at 4,929 deg. These melting points, which represent the lowest temperature at which a small piece of the brick could be distinctly seen to flow, were determined in an electric vacuum furnace, the temperature being measured with an optical pyrometer.—*Popular Mechanics*.

TELL IT TO THE WAITER

The man and the woman went to a restaurant after the show the other night. The man was feeling important and the woman was feeling hungry.

"What'll you have, dear?" asked the man when they were seated.

"What may I have, dearie?" countered the woman, removing her gloves.

"You may have anything on the menu, darling. Shall I read it to you?"

"No, Pet, read it to the waiter."

GRAPHITE FOR MEDICINAL PURPOSES

One of the young ladies connected with the Dixon office had a very severe toothache, and inadvertently she got hold of one of the small tubes of the Dixon Graphitoleo, thinking that it was a tube of Capsicum Vaseline, and applied it in liberal quantities. Much to her surprise and gratification the relief was immediate, but lo! and behold, the next morning she was quite alarmed to discover that her complexion had changed from beautiful rosy cheeks to the blackest ebony.

WHY, INDEED

"Here is a story of a Chicago woman who says that present marriage laws make woman the slave of man," said the square-jawed matron as she looked up from the newspaper.

"Why don't they enforce the law, then?" meekly asked Mr. Henpecke.—*Buffalo Express*.

DIXON'S graphite publications sent free upon request.

An Inside Story Of The Crucible

IN the walls of a Dixon Crucible is spun the secret of its efficiency, durability, economy, dependability, and its world wide reputation.

If walls had voices as they are said to have ears, a story of surpassing interest could be told—

Of a concern, the largest, oldest and only one of its kind in the world founded by the inventor of the graphite crucible;

Of a concern with world knowledge of graphite deposits, with use for all forms and grades of graphite, and therefore with no incentive to use other than the correct form and grade of graphite in each of its many products;

Of skill in workmanship which only the heritage of 86 years of experiences and discoveries can make possible;

Of a standard which does not permit of anything but absolute uniformity of the highest possible order.

In satisfaction alone it is worth while buying Dixon Crucibles, and in the economy of service Dixon Crucibles are supreme.

Write for booklet No. 190-A, "The Care and Use of Crucibles."

MADE IN JERSEY CITY.

**Joseph Dixon Crucible Co.
Jersey City, N.J.**

Est. 1827



GRAPHITE

VOL. XV.

OCTOBER, 1913.

No. 10.

Issued in the interest of Dixon's Graphite Productions, and for the purpose of establishing a better understanding in regard to the different forms of Graphite and their respective uses.

STOVE POLISH

We have within the past few days received three inquiries from women who are evidently good housewives, who insist that they must have Dixon's Stove Polish and none other, and who ask what grocers near them keep Dixon's old time Carburet of Iron Stove Polish.

Dixon's Carburet of Iron Stove Polish was first made by Joseph Dixon in 1827, when the only stove polish known was a powdered stove polish called British Luster, being simply finely ground black lead or plumbago.

For a great many years the Dixon Carburet of Iron Stove Polish was the only stove polish known and the only one cared for, and consequently had the call from all housewives who

wanted to keep their stoves looking neat and trim with a brilliant polish. After a time a rival stove polish was made under the name of "Rising Sun," and being well advertised and strenuously pushed, enjoyed a large sale along with Dixon's.

Within the past twenty-five years, however, due to the increase of the prosperity in the servant girl, the demand has been very largely for "a lick and a slap" stove polish in paste or liquid form that can be quickly and easily applied even though it has short life.

Dangerous liquid stove polishes were placed on the market until the law stepped in and forbade the making of them.

It is interesting, therefore, to receive, as we have within the last few days, three or four letters from different parts of the country, of which the following is a sample:

"I want to know if I can get any of Dixon's Carburet of Iron Stove Polish? I have used it for forty years. In the stores where I have been getting it they do not now keep it, and can you tell me where to get it, or can you send me six cakes? If so, I will send the pay by return mail. Please tell me where I can find it by return mail. It is the best stove blackening and I do hate to have to go without it. My mother used it as long as she lived, so if you can help me to get some, I will thank you very much. Hoping to hear from you and to get it, I enclose stamp for return reply."

This letter comes from the state of Connecticut, which has always been known for its good housekeepers.

AUTOMOBILE ACCIDENT

Through a most unfortunate accident, the sister of Mr. John M. Ready, the New York Manager of the Dixon Company, was badly injured and later the injury resulted in her death.

The accident was due to no carelessness whatsoever, but occurred by the sudden sinking in of the ground between railroad tracks while the machine was crossing the tracks at a speed of not over three or four miles per hour.

Through the death of this sister, Mr. Ready is alone left of his immediate family, having suffered the loss of his father and mother within a comparatively short time. The sister leaves a husband and two children.

The letters received by the Dixon Company from the different branch managers and others, show the high esteem in which Mr. Ready is held by all who know him, and the sincere sympathy that always goes out to him from his friends in times of trouble.

Such letters of sympathy, as we have said, have come to the Dixon Company and have also been received by Mr. Ready himself.

WHEN SPRINGS SQUEAK

Grease or Graphite Between the Leaves Will Stop Noises

"We have all heard annoying little squeaks from an automobile as it goes over a bump in the road or over a crosswalk," said H. S. Strong, automobile man, the other day, "and more often than not these noises are due to unlubricated springs. As the springs act under the impact of a bump, the leaves naturally rub against each other; and just as naturally they squeak if there is no lubricant between the leaves.

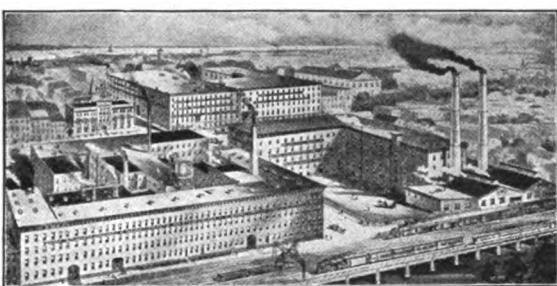
"To oil the springs requires a little work, but the leaves need the oil and the elimination of squeaking noises is worth the work. The car must be jacked up to take the weight off the body off the springs. Not more than one spring should be jacked up at the same time. If there is a little clip to hold the leaves together remove it. Then the leaves can be pried apart with a screwdriver or a small tool made especially for this purpose. They can be oiled, one by one, with an ordinary oil can, but a better plan is to work graphite and grease between the leaves with a knife blade. The graphite and grease should be fairly stiff, so that the springs will be lubricated for a longer time. Ordinarily twice a year is sufficient, if the proper grade of graphite and grease is used."—*N. Y. Times*.

THE WHEELS of true love will never squeak on the axle if Dixon's Graphite Axle Grease is used.

ESTABLISHED 1827



INCORPORATED 1868



JOSEPH DIXON CRUCIBLE CO.

JERSEY CITY, N. J., U. S. A.

**Miners, Importers and Manufacturers of Graphite,
Plumbago, Black Lead.**

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ATLANTA OFFICE, Fourth National Bank Building.

EUROPEAN AGENTS,

Graphite Products, Ltd., 218-220 Queen's Road, Battersea, London.

FOR THE AUTOMOBILIST

Every man who has the care of an automobile knows that kerosene is useful for removing carbon from the engine cylinder. But he may not know that too much kerosene will cut the lubricating oil and remove it entirely from the engine cylinder so that the gas will leak between the cylinder walls and the piston, thus reducing power. If, however, the cylinder walls and the piston have become coated with flake graphite through the use of graphite in the oil in the engine base, there will be no unsatisfactory results from the use of the kerosene, as the graphite is absolutely impervious to kerosene, and it will be found that it has formed a coating on the surfaces of the pistons and cylinder walls of marvelous smoothness and endurance.

Furthermore, when flake graphite has been used in the lubricating oil, the carbon will not become so firmly attached to the surfaces and can, therefore, be easily removed with much less kerosene. In fact, it has been said that the use of graphite largely prevents the accumulation of carbon.

Those who make use of kerosene should introduce only a tablespoonful or two into each cylinder after a hard run, when the engine is hot.

Rust spots from any of the surfaces on an automobile may be quite easily removed by rubbing them hard with kerosene and then by rubbing them with graphite. The same piece of cotton waste that was used in rubbing them with kerosene may be used in applying the graphite, as the graphite adheres nicely to the oiled waste.

Rubbing the exhaust pipe and engine surfaces, where the engine surfaces are not enameled, with oiled waste and graphite will prevent rust. Such treatment is especially useful on the exhaust pipe and the muffler.

Every man who has been obliged to put on a tire has found difficulty because of friction between the tire and the metal rim. If the rim is rubbed with Dixon's Graphite, the tire will be found to slip on, as one writer puts it, quicker and easier than you were yanked across your mother's knee when you were a disobedient kid.

It will be noted that anti-skid chains are apt to rust especially in the links. They may also be treated with Dixon's Graphite and rust-prevented.

We copy the following from *Motoring*: "Be sure to incorporate a piece of indelible pencil in your tire kit. It is absolutely invaluable in the repair of punctures, especially when small. After the vicinity of a puncture has been solutioned, the exact location of the puncture is usually invisible unless an indelible pencil has been employed."

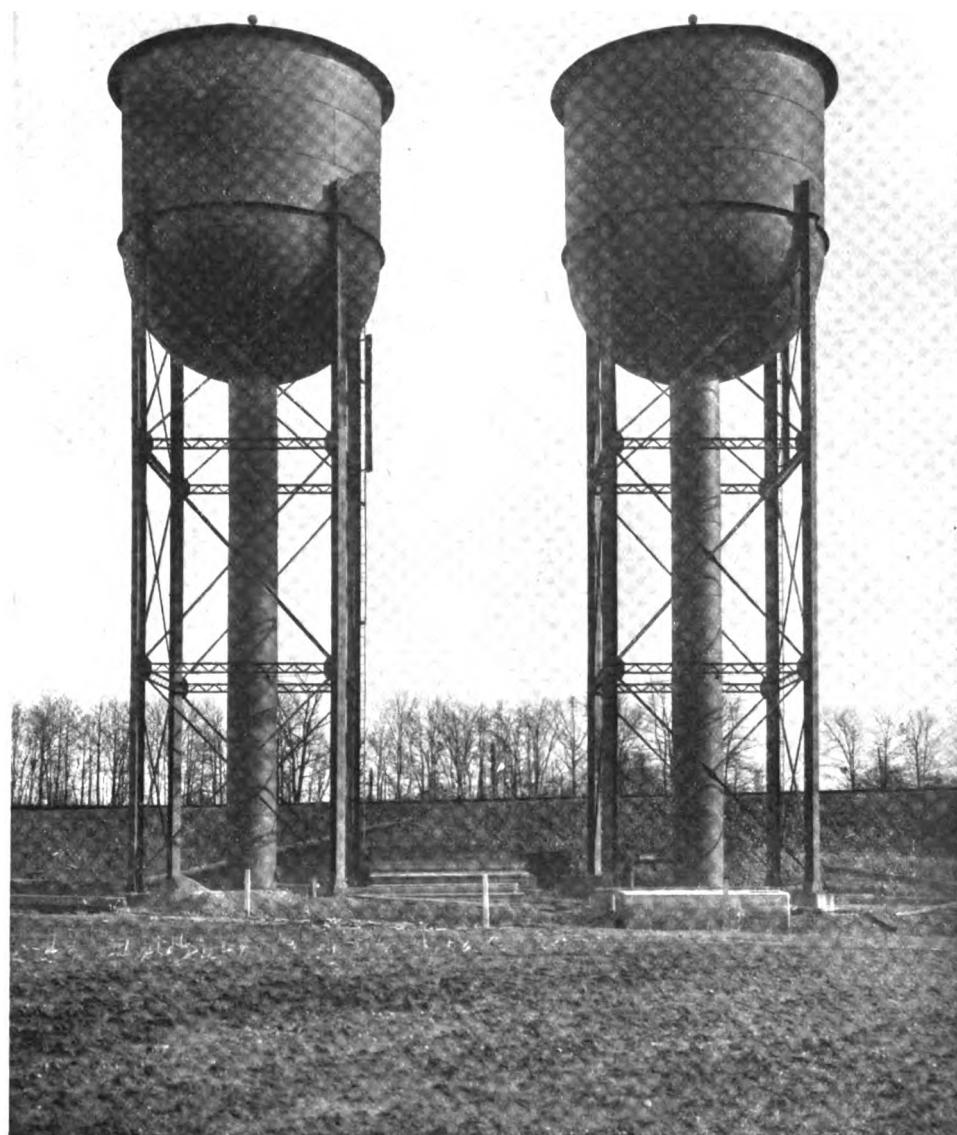
The moral of this is to carry along a Dixon "Eterno" or an "Endurance" indelible pencil. Nothing better for writing, and nothing better for the purpose mentioned above.

We are also told by *Motoring* that where brakes are operated by wire cables the cables should frequently be inspected at places where they pass round a bend, or in such positions where they are liable to chafe. After a strand or two of the cable has gone, the rest soon follows, with the result that the cable is liable to give way at the critical moment.

All such danger in wear and breakage may be either largely or entirely prevented by the use of Dixon's Graphite Grease. Any of Dixon's heavy automobile greases will answer, but the regular Waterproof Graphite Grease is the ideal material.

WASTED POSTAGE

Very likely the Dixon Company wastes many postage stamps, as mailing lists are always more or less uncertain, but we doubt if we duplicate our lists to the extent that other large concerns do, at least we hope not. Very often we receive three to six pieces of mail matter addressed to one person, all bearing a two cent stamp, and sometimes every officer of the Dixon Company and one or two heads of departments will receive on a given morning, a similar communication, all filled in as though it were a very personal letter—the envelope bearing a two cent stamp. There are times when each one will receive two of these.



**PENNSYLVANIA RAILROAD COMPANY'S TWIN
WATER TANKS NEAR PLAINSBORO, N. J.**

Speed and safety are the all-important factors in railroad service and both are represented on this page in the illustration of the Pennsylvania Railroad's twin water tanks at the pumping station near Plainsboro, N. J.

Each of these water tanks has a holding capacity of 100,000 gallons and the contents are piped, as may be seen in the illustration, to water pans situated along the tracks, which in turn supply the water to trains while under speed.

Safety, which in all good railroad service, extends to the maintenance of property, is here represented by Dixon's Silica-Graphite Paint, which protects both tanks and girders from corrosion and decay.

Property owners to whom the selection of paint seemed a difficult problem, are finding it easier and better in every way to adopt the paints used as railroad standards, for such standards mean rigid tests, under which none but the best survive. Dixon's Silica-Graphite Paint is the standard protective paint for railroads—why not make it your standard?

DIXON's graphite publications sent free upon request.

MOSQUITOES

Much used to be said about Jersey mosquitoes, and some people who are not aware that the old time Jersey mosquito is now a very rare bird, still think that we are tormented with the pests. Even the old time Jersey mosquitoes were not to be compared with those that we are told exist in India. In most parts of India protection against malaria-producing mosquitoes, which bite almost entirely at night, is an absolute necessity, especially as the use of wire screens to keep all such insects out of houses is almost unknown. The average Indian bungalow, as soon as lighted in the evening, especially during the monsoon period, is apt to swarm with all sorts of disagreeable insect life, and frogs, lizards, and even occasionally poisonous snakes, will make their appearance in bedrooms. It is usually the custom to set the netting over the posts of the beds before the rooms are lighted previous to retiring in the evening, and in the morning take them off again to allow the beds to be better aired. In some instances where mosquito netting may not ordinarily be required or desired, the bedstead nevertheless may be so patterned that mosquito fittings may be readily clamped on when wanted. The sale of bedsteads without any provision whatever for mosquito nettings is so limited as hardly to justify much consideration.



DIXON DRIVERS ENJOY OUTING

Ball Game and Freak Races are Features of the Day's Pleasure

Sunday, August 24, was the time; Midland Park, Grant City, S. I., was the place, and a bunch of rollicking, fun loving Dixon drivers with a select and convivial few others celebrated the occasion.

At 7.30 A. M. the photographer secured the evidence reproduced above. In the background may be seen three corner sections of as many Dixon factory buildings, which indicate where the start was made. The big Dixon automobile truck, lubricated with Dixon's Automobile Lubricants and gayly decorated and labeled, stands ready for the hard day's work for which it was scheduled. Behind it is a smaller truck, likewise lubricated, decorated and ready for the trip.

Included among those present were club president Jim Kelly and vice president Jim Ramsey. The secretary and treasurer was also present in the person of Tommy Meehan. Two husky sergeant-at-arms succeeded in restraining, while *en route*, the thirty or more jovial spirits who came fully armed with cow bells, horns and other peace destroying implements.

The chief event of the occasion, a baseball game between the drivers and crucible factory men, resulted in a victory for the drivers. The score is not published because at the last moment our printer discovered that he did not have the required amount of type for the column of errors. The older members indulged in football and played a remarkably consistent game until lack of wind forced many of them to retire.

Gus Smith became the man of the hour by winning the Fat Man's Race. He reached the tape fifty pounds ahead of his nearest competitor.

In the fifty yard dash Dave Cutter, the speed demon who pilots a big Dixon truck between Jersey City and New York, easily captured the event. Dave declares he would have made faster time if he could have forgotten all about police regulations and traffic squads.

This thought, however, did not stop Dave from carrying away the honors of the occasion, for in the Wheelbarrow Race, a blind-folded affair, he again demonstrated his prowess as an athlete. There are some who hint that Dave wore a diaphanous bandage, but Dave says he is ready at any time to produce the cloth to prove that he won honorably. This seems fair of Dave.

The festivities concluded with a joy ride back to the city. The journey was marked with frequent demonstrations. The sergeants-at-arms were unable to cope with the situation until the happy and hilarious crowd arrived in Jersey City at 9:30 P. M. "It was some outing, believe us," was the unanimous and expressive opinion.

SPEAKING of the use of graphite in boilers, Asa P. Hyde of Binghamton, N. Y., states that when fed through the feed pump and hot water meter in connection with compound, it has lessened the wear and need for frequent recalibration of the meter, the pump runs easier and the packing wears longer.

—*Practical Engineer.*

NOTHING "AS GOOD AS" DIXON'S SILICA- GRAPHITE PAINT

The eminent Consulting Mechanical Engineer, Mr. Geo. L. Fouler, of 83 Fulton Street, New York, has made the following report to the superintendent of bridges and buildings of one of the leading trunk railways on tests of Dixon's Silica-Graphite Paint, and we are privileged to quote therefrom as follows:

In writing I will confine myself solely to matters of which I have a personal knowledge and experience, so that what I say would be accepted as evidence in court.

The first question is: "What do you consider the best paints to use for the purpose of preserving steel and iron structures where exposed to the fumes from coal and coke from locomotives?"

From a somewhat extensive experience in this direction, not only in the observation of the action of paint on overhead bridges, but in roundhouses as well, I place a silica-graphite paint at the head of the list.

Now, as to my reason for preferring a silica-graphite paint.

In the first place, I have seen it in use in roundhouses and overhead structures for years where it has given the best of satisfaction and shown great wearing qualities. Further than this, during the past year I have made some special investigations that have shown me the reason for the experience of the past.

It is hardly necessary to call your attention to the fact that inertness is an essential quality of a pigment that is to resist the corrosive actions that are set up in an atmosphere impregnated with acids, as in the case where a paint is subjected to locomotive fumes and that, for absolute inertness, in this regard, silica-graphite is unsurpassed.

It is also superfluous to tell you that a pure graphite paint is not, in itself, well adapted for this work. A pure graphite paint has too great a covering capacity that leaves the coat too thin to be a success when subjected to wear and corrosion. Hence it must be thickened with some other substance, as a pigment, that is equally inert, and such a substance is to be found in silica. The combination of silica and graphite, therefore, makes a pigment that is especially adapted for use where acid fumes are to be encountered.

There is still another reason along these lines. In the course of the investigations referred to, I subjected steel plates that had been coated with a silica-graphite paint to a strong acid reaction for several months, without destroying the texture of the surface. To the eye, the surface appeared to be merely dulled, and this dullness, which appeared after a month or so of acid action, did not seem to change thereafter during the whole period of the test. When, however, the surface was examined under the microscope, the reason for this durability was at once apparent.

Ordinarily a paint skin consists of the fine particles of pigment embedded in the dried coating of oil. Each particle should be set in an encysted case of this hardened oil, and the whole outer surface of the freshly dried coat should be one of the oil. Linseed oil, is not, however, of itself a good resistant to acid action, and when subjected to gases or a bath such as I used, the outer film is soon dissolved and cut away. And it was here that the microscope showed what had taken place and

what would have to take place before further deterioration could occur.

The dulling of the surface meant that the outer coating of linseed oil had been dissolved. Then there appeared a surface that, under a magnification of thirty-four diameters, appeared as though it had been sanded. It was seen to be covered with a complete coating of the minute particles or grains of silica and graphite, just as a sanded surface appears to the naked eye. In short, the inert silica and graphite formed a complete protective coating to the matrix of linseed oil in which they were embedded; and, until they were worn away or the acid had had a chance to eat slowly in between these particles and so undermine and loosen them, the paint would endure and the surface of the metal beneath be thoroughly protected from attack.

The second question is: "What effect does salt water have on steel and iron, where wholly or partly submerged, all or a part of the time?"

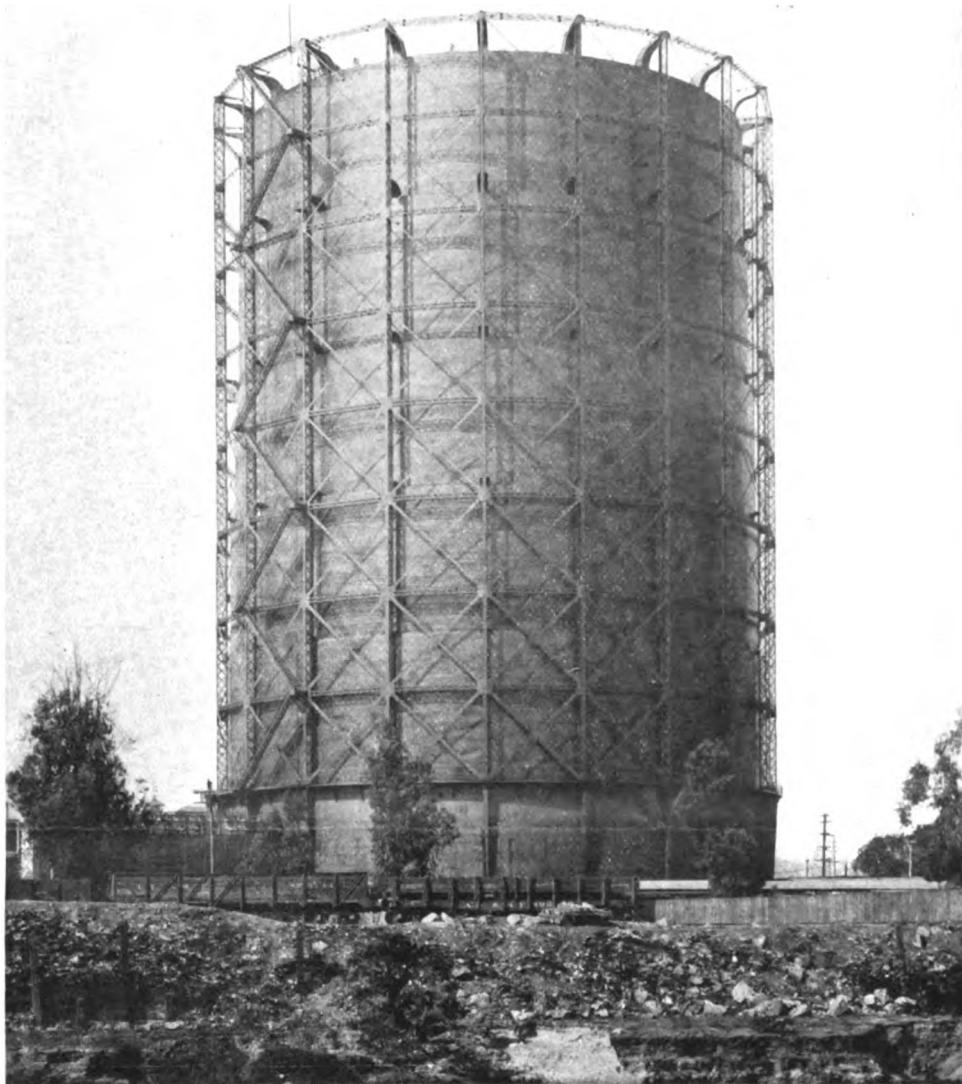
Rust, corrosion, rust! Everyone knows that. Perhaps, however, a detail of some tests that I made, may be of interest. I took a number of steel plates and painted them with silica-graphite paint, and subjected them to salt brine drippings for something more than three months. When the test was stopped, the plates were found to be badly corroded, as was to be expected on the unpainted portions, while the parts protected by the paint showed little or no action of this sort. The unpainted portion of the plates were covered with a thick coating of rust that had swollen and blistered until it projected $\frac{1}{8}$ inch or more from the surface of the metal. It could be easily scraped off and, while it was red on the outside, it was black beneath and appeared to be the black oxide of iron. When peeled off it left the metal bright beneath, but it (the metal) turned to a greenish hue within half an hour. As for the painted surfaces, there was no appreciable deterioration except for the loss of the original gloss. I found then that here, when subjected to brine drippings, consisting of water in which twenty per cent of its weight in salt was dissolved, the silica-graphite paint fully protected the plates against a corrosion that was of most serious and destructive character on the unpainted portions of the plate. I may add that one-half of the surface of these plates was painted. The brine was allowed to drip and strike upon the painted part and trickle down over the unpainted portion."

We pride ourselves that Dixon's Silica-Graphite Paint *lasts longer* and is therefore the leading protective paint from an economic point of view.

NEEDS A SUCKER IN HIS PLATE

The following letter was received by a dentist, according to B. L. T.'s column in the *Chicago Tribune*.

"Dr. _____: Say, as I have been thinking about my teeth I want you to put a sucker or whatever you call them in the roof of the plate because I think they will stay in better I want one in there any way and I want white teeth on my plate whether they match my other one or not I want white teeth just the same we are the one that got to finish paying for them and I am the one that got to wear them so I want them as I say I do. I will not have the plate unless it has white teeth on and a sucker in the roof of the plate."



**GAS HOLDER, LOS ANGELES GAS AND ELECTRIC
CORPORATION, LOS ANGELES, CAL.**

One of the most unfortunate things that can overtake the growth of a city is to find undeveloped its common facilities, such as light, heat and power. Los Angeles, the metropolis of Southern California, is to-day rated as one of our most progressive cities, and its progress owes much to the fact that its industries and its people have not had to suffer for lack of light, heat and power. Procrastination has not been the policy of the Los Angeles Gas & Electric Corporation, to which the illustration above bears witness. The magnificent holder which this illustration represents, possesses a capacity of 6,000,000 cubic feet. It was erected and painted by the Camden Iron Works of New Jersey with Dixon's Silica-Graphite Paint, Natural and Olive Green Colors.

"GRAPHITE AND OIL," says the *American Motorist* in its June issue, "are used on metal-to-metal clutches." In the same issue of this trade journal it is stated that "almost pure flake graphite mixed with a small amount of oil will make the best lubricant between the spring leaves of the automobile."

MEXICO

We have received circular from the West relative to conditions in Mexico and concluding with the statement that if our conclusions are in accordance with this circular, that we request the press of our city to assist in their dissemination, and have our friends join in the petition to our member of Congress, that he act in accordance with these ideas. To this request we have made the following reply:

"We are in receipt of your circular letter of August 13 and note contents. We have withdrawn our own representative from Mexico because of the condition of business and are awaiting the final outcome. We have talked over the subject with our several representatives, and also with the principals of some of the leading houses of Mexico who are valued customers of ours, and must confess that, as there are so many sides to the question, it would not be becoming on our part to join in a petition to our members of Congress or to our senators, requesting any particular action be taken.

"We believe that President Wilson means to be fair in every way, and that he will be, and that possibly through Governor Lind and the Mexican officials, the outcome will be all that friends of good government can wish for."

LUBRICATION OF FIRE APPARATUS

The importance of lubrication is realized when one remembers that a car would run to ruin in a comparatively few minutes without it. More than one-half the prematurely worn out motor cars owe their condition to imperfect lubrication.

If absolutely perfect lubrication were possible there would be almost no deterioration to the car. In addition, the car would develop full power, would be free from all disagreeable noises produced by friction and repairs to mechanical parts would be almost unknown. It is evident that the nearer we are able to approach to perfect lubrication, the more fully will we secure these benefits.

Flake graphite is the best solid lubricant known, when it is properly used. The places where it can be used alone are rare, however, partly because the machinery is not designed for this form of lubrication; but the lubrication value of any oil or grease is always increased where it is possible to add a proper amount of flake graphite.

Bearing surfaces may appear smooth to the eye and may feel smooth to the touch, but a microscope will disclose hundreds of minute irregularities in the metal which cause the surfaces to appear something like nutmeg graters. When two metal surfaces are brought in rubbing contact, the minute irregularities interlock and act as a retarding force. That is why it is impossible to run machinery without lubrication of some kind.

The object of oil or grease is to provide a film viscous enough to prevent contact of the metal surfaces, yet not so viscous as to have an excessive amount of friction within itself. This ideal condition is seldom realized in practice. Flake graphite performs its lubrication function on an entirely different principle. It attaches itself directly to the metal surfaces, fills in the microscopic projections and forms a smooth, tough, durable coating that positively prevents actual metallic contact. Thus the cause of friction, microscopic roughness, is directly reached.

Oil and grease are probably the best known reducers of friction, but they are too sensitive—their range of highest efficiency is extremely narrow. As conditions vary from those which are normal for any given oil or grease, its efficiency drops rapidly. Too high a temperature thins the lubricant so that it cannot support its load; excessive heat disintegrates both oil and grease. If the temperature is too low the lubricant may thicken and exert a retarding force because of its great viscosity. Speed and pressure are important factors—no one oil or grease can well adapt itself to wide demands in either particular. Flake graphite is always the same under all conditions. Heat does not diminish its efficiency nor does cold make it sluggish. Pressure does not squeeze it from the bearing, it is indifferent alike to high speed or low. Even acids and alkalies cannot affect it.

The conditions met with in lubricating automobile fire apparatus are particularly severe. The lubricants used must necessarily remain for indefinite lengths of time in the car unused and must also be able to meet the immediate and trying conditions of active service. Flake graphite remains inert under all conditions in winter and summer, at all speeds and loads. It is, therefore, ideally satisfactory to the peculiar requirements of the motor fire truck.

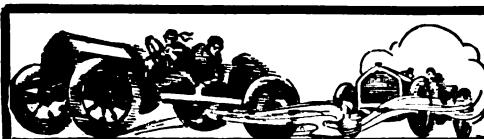
Any good oil or plain grease becomes a better and more efficient lubricant if about five per cent. by volume of high grade, finely ground flake graphite is thoroughly mixed with it. However, it is always better to purchase a special preparation made by dependable manufacturers because you will then be sure to have just the right proportion and grade of graphite intimately mixed with the best mineral grease base. The flake graphite polishes the bearings and hence less grease is required to overcome friction; or in other words, a given quantity of properly graphited grease will last much longer than the same grease containing no graphite.

A word of caution should be given against using all kinds of graphite lubricants that are on the market, as some contain graphite that is absolutely harmful to bearings because of its gritty nature. It is well to buy the highest priced graphite grease obtainable and you will then be sure that you have a lubricant par excellence. A matter of a few cents extra cost is of no consequence when it is borne in mind that such products last far longer than the cheaper grades and also that in the fire fighting service no chances can be taken with the failure of doubtful lubricants.—*Fire Engineer.*

LEAD PENCILS AFFECT MAGNETOS

When it is necessary to take the breaker-box cover off a magneto the common variety of lead pencil is, perhaps, the most harmful article that might be used in helping to pry the cover loose, or to mark the exact position it must occupy when replaced. If even so much as a light pencil mark is made upon it, the spark-producing propensities of the instrument are likely to be reduced, for the graphite of the pencil is a very excellent conductor of electricity. If there is a pencil mark on the distributor block, the spark will run along it and escape, instead of jumping the gaps in the plug.

—*Popular Mechanics.*



Speed Cars Use It

because it can be depended upon to lubricate all the time, whereas if the supply of ordinary oil and grease fails, there is serious trouble immediately. The lubricating effect of

DIXON'S Motor Graphite

(Pulverized Flake:

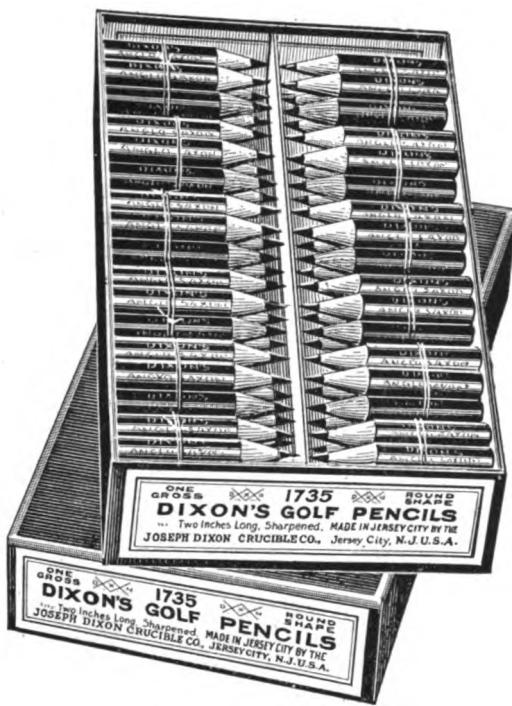
persists longer than that of other lubricants on account of the physical structure of the graphite—it covers the microscopic roughness of a bearing with a tough, durable veneer that is almost frictionless.

Ask your dealer for Dixon's Graphite Grease No. 677—for differentials and transmissions More economical than plain oil or grease.

Valuable information in our free book "Lubricating the Motor." Send name and model of car.

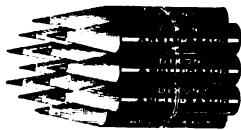
Joseph Dixon Crucible Co.
Established in 1827
Jersey City New Jersey





**TO GOLFERS, GOLF CLUBS AND STATIONERS
CONCERNING DIXON'S GOLF PENCIL No. 1735**

It's the little things in life that count, and one of them is Dixon's Anglo-Saxon Golf Pencil. For the golfer, whose coat and vest pockets are sacrificed for a free and easy stroke, the most annoying loss is a place for a pencil. The fate of a pencil is to become lost, strayed or stolen, and especially relentless is fate upon the golf links. Dixon's Golf Pencil is but two inches in length and, carried about in one's trouser pockets, its whereabouts is never in doubt. The point of a pencil is either most exasperating or penetrating, or both, according to how tender the human hide. Either the point breaks with each difficult



stroke or the golfer sustains personal injury at pencil's point. All this, of course, is said about the pencil of ordinary length. With Dixon's Golf Pencil the risk of injury and the cause of profanity are reduced to a minimum. The lead contained in Dixon's Golf Pencil is of the same choice quality—medium grade—that has for so long distinguished the popular Anglo-Saxon Pencil—and in proof of this the name Anglo-Saxon is stamped on Dixon's Golf Pencil. Dixon's Golf Pencils are sharpened, ready for use, to a fine point and make clean, clear, and legible score marks. So small is the cost of Dixon's Golf Pencils that many clubs will furnish them to members without charge and golfers may simply throw them away after a day's use. Dixon's Golf Pencils have been introduced to all golf clubs and are advertised to golfers in the leading golf paper of the country. The demand for these pencils should reach the stationer first. Are the stationers who read GRAPHITE prepared to supply these pencils to golf clubs and golf players in their respective vicinities?

DIXON'S graphite publications sent free upon request.

AN ADDRESS TO BOYS

The following is the gist of an address read by Mrs. James Madison Bass to the graduating class at Public School 132, Manhattan, in June 1913. In the beginning she gave credit to the splendid thought of Chancellor David Starr Jordan of Leland Stanford, Jr., University. She said:

"Your first duty in life is toward your afterself. So live that your afterself—the man you ought to be—may in his time be possible and actual."

"Far away in the years he is waiting his turn, his body, his brain, his soul are in your boyish hands. He cannot help himself."

"What will you leave for him?"

"Will it be a brain unspoiled by dissipation, a mind trained to think and act, a body true in its response to the life more abundant expressed in bracing manly virtues?"

"Will you, boy, let him come as a man among men in his time? Or will you throw away his inheritance before he has had a chance to touch it? Will you turn over to him a brain distorted, a will untrained to action, a body diseased, and a mind unfit? Will you fling away his every hope, and force upon him the inexorable decree that the man you might have been shall never be?"

"Will you let him come, taking your place, gaining through your experiences, relying on the clearness of your vision? Will you let him find that you have kept faith with him, been true to your ideals, and have fashioned in a clean body, a splendid mind and a pure soul, a foundation fit for the master builder? Will you give to this man, your afterself, an inheritance more precious than rubies, will you give him the power to go forth unfettered and without hindrance unto the measure of the stature of the perfect man?"

**AROUND THE WORLD WITH DIXON'S
AUTOMOBILE LUBRICANTS**

Edwin P. Kohl of Madison, Wis., called on us the other day to get a sign for his automobile.

Mr. Kohl is just starting on a two year's trip by automobile around the world, and following the usual practice of those who want to get the best for their automobile, he equipped his Henderson car with the Dixon Graphite Lubricants.

It was interesting to us as how Mr. Kohl came to select the Dixon Lubricants and we asked him what influenced him in his choice, and he told us that he had noticed our advertisements and decided that a grease which was good enough for Teddy Tetzlaff and other well known automobile racing men was good enough for him.

We expect to have some photographs of Mr. Kohl and his car from time to time for GRAPHITE, taken in various parts of the world.

A CLERICAL HUSTLER

Folks who figure the rural clergy have nothing to do but preach once a week and eat fried chicken, are urged to consider this from a Western paper. "The Rev. Pinkerton has been renovating the Prairie View Church by papering, laying a new floor, painting the woodwork inside and applying Dixon's Silica-Graphite Paint to the iron fencing."

"PULVERIZED FLAKE" GRAPHITE FOR BOILER SCALE

After an engineer has become convinced that the use of graphite in boilers as a scale remover and preventive is a good thing, if he is not already familiar with the various grades of graphite it is very important that proper investigation be given this phase of the subject before introducing any of the material into his feed water.

Graphite as found the world over, is divided into two general classes only—flake, or crystalline; and amorphous.

AMORPHOUS—This grade, as the term would indicate, has no determinate form of character. Graphite ore, in any form, is found more or less impregnated with rock, quartz, clay, etc., of the same indeterminate form. In the refining process of amorphous graphite it is practically impossible to separate the graphite absolutely free from these impurities, unless at such great expense that the prevailing commercial price is far exceeded. This is largely due to the fact that there is no difference between the shape and size of the amorphous particles of graphite and of the residue of impurities.

The grades of amorphous graphite, which might be termed reasonably free from clay and grit, and yet not entirely so, as offered for sale, are very valuable for certain purposes, such as foundry facings, stove plate work, etc.

The presence of these impurities in amorphous graphite and particularly the clay contained therein, not only greatly lessens the scale loosening qualities of this grade, but to some extent aid in the formation of a pasty or mudlike mass in the presence of water, settling on the plates and tubes.

"PULVERIZED FLAKE" GRAPHITE—This grade is found in various forms with regard to thinness of flakes and purity. And to a great extent purity of the product depends upon the thinness of the flake. Where it is not possible to reduce the ore into thin flakes there is considerable chance of the large thick flakes containing between their individual layers small quantities of impurities. In producing graphite from ore that easily renders itself into thin flakes, it is possible to procure such grade with a guarantee that it contains absolutely no impurities of a detrimental character. It is, therefore, easily seen the thin flake variety is best adapted for particular work, such as lubricating and as a boiler scale remover.

However, flake graphite is commonly known and recognized by its large flaky nature. While this particular size thin-flake variety has been used to a small extent for boiler work, it is not in the form that will give the highest efficiency as a boiler scale reducer. This same thin-flake grade, subjected to considerably more grinding and bolting, is produced into a *finely pulverized flake*, and the only means of determining it is flake graphite, *finely powdered*, is by means of a high powered magnifying glass. Experience has shown that this *finely pulverized thin flake* variety will be distributed more evenly on the surface of the shell and tubes, and become more permanently attached to the metal than the amorphous, or the thick flake variety. In other words, every particle of the *thin flake finely pulverized* graphite is a scale reducing particle. And, furthermore, no impurities are present to reduce its efficiency.

It is now so generally conceded that graphite is the greatest agency thus far offered for the successful removal and pre-

vention of boiler scale that it is proper that careful consideration be given the grade of graphite best adapted for this work.

Both amorphous and flake graphites are advertised for this purpose, but investigation shows those who manufacture and sell both grades, recommend most highly the *finely pulverized flake* in preference to the amorphous grade, with the statement that their margin of profit is approximately the same on both.

—*The Popular Engineer.*

THE VALLEY TURNPIKE COMPANY

Use Dixon's Silica-Graphite Paint on Their Bridges With Great Satisfaction

The Valley Turnpike Company, Stephens City, Va., controls the road from Winchester to Staunton, Virginia, along the line of which there are several bridges. During the past year they have ordered through hardware dealers several barrels of Dixon's Silica-Graphite Paint for use on their bridges. The paint has been so satisfactory that their superintendent, Mr. L. R. Dettra, has been pleased to write us that they have stopped bridge painting for awhile, but in the late fall or next spring they expect to resume work. Dixon's Silica-Graphite Paint has been found "*very satisfactory.*" To us the most satisfactory part of Mr. Dettra's letter is the dependability that he places upon the Dixon Company, when he says that so long as we furnish him with the kind of goods in the future that he has been furnished in the past, we may depend upon his business.

The Dixon Company has insisted upon making only one quality of paint,—the very best paint that it is possible for us to manufacture. Contractors and others who have desired a paint somewhat cheaper in price than we offer, have written and said to us, they did not understand why the Dixon Company, which makes several different qualities of lead pencils, would not make more than one quality of paint.

Our reason has simply been this: that almost any one can tell the difference between a high priced, high quality lead pencil, but a graphite paint will always look alike whether it is made of the best linseed oil or a poor quality of oil and adulterated at that. Only time and wear can test the quality of a paint.

SELLING AGENTS

We believe that there is no better evidence of the standing of a firm or company, than the offers that come from men of character and position to act as representatives of that firm or company for the marketing of their products.

The Dixon Company consider that it is a privilege to receive such offers from all parts of the world and very good evidence of the high quality and grade of the Dixon graphite products and the standing of the Dixon Company.

As we have repeated so many times, the Dixon Company is rather unique in this, that it manufactures products that touch every line of industry from the user of a dainty program pencil to the user of a huge crucible capable of holding a thousand pounds of molten metal. We furnish products not only for the dancing salon and the foundry, but for the school, the office, the architect, the railroad, and as we have said above, for every conceivable industry throughout the world.

RECOGNITION

The great Russian novelist Tolstoy tells a quaint tale of a village shoemaker, who worked in a shop which had only one small window. Glancing up from his last, the shoemaker could only see the shoes of the passers-by. But that was sufficient. He could thereby identify every individual. That was Martuin, for his shoes bore the patch he had affixed last week! That was Ivan, on whose heavy boots two days ago he had placed new soles. That was Stepan, for he was wearing the identical heels which he had straightened out only yesterday. And so on. When the villagers had real shoe troubles, they were bound to come sooner or later to the shoemaker who had the best reputation.

All of which suggests the thought, that by our works we are known. If you see a good standing paint job, showing year after year great resistance to weather and wear, you can be sure that the paint applied was Dixon's Silica-Graphite Paint, which *lasts longer*. Don't experiment. We quote just one sentence from Tolstoy's story, and the reader can make his own explanation. "Adyeitch, the shoemaker, had plenty to do, because he was a faithful workman, used good material, did not make exorbitant charges, and kept his word." Both Tolstoy and Dixon preach and practice "Service."

LONG-STROKE MOTORS MORE DIFFICULT TO LUBRICATE

We read in *The Automobile* that a study of the American cars introduced during the last three years shows that the tendency towards forced-feed oiling has grown almost at a proportional rate with the increase in the stroke-bore ratio.

The use of a long-stroke motor necessitates the design of a higher cylinder. This necessity is due to two causes, first to the longer stroke of the piston within the cylinder and second to the fact that the connecting-rod swings through a greater arc about the wristpin.

A higher cylinder is harder to lubricate by splash than is the lower cylinder. The oil must be lifted to a greater height in the former type. These facts introduce practical difficulties in the way of making the amount of oil supplied proportional to the work of the piston. Where special provision has not been made for a more thorough system of lubrication, danger of the pistons seizing may be largely, if not entirely, overcome by the use of a finely pulverized flake graphite. The minute flakes become firmly attached to the bearing surfaces, forming a veneer-like coating of marvelous smoothness and endurance. When such surfaces are first established, less oil is required, the danger of seizing is obviated and the leakage of gas fully prevented, enabling the motor not only to run more smoothly, but to develop greater power.

"ADVERTISING formerly consisted of the truth. Then imagination and eloquence came to the aid of the truth and for a while it looked as if they would crowd it out entirely.

With the aid of imagination a man can sell cactus deserts and colored water, automobiles and college educations, hymn books and patent crackers, tame lions and trained fleas, skyscrapers and seed potatoes, fountain pens and patents of nobility, chewing gum, corsets and blue sky."

THE DIFFERENCE

In talking with the master mechanic of a railway company who had invested in an automobile, we found that the difference between a mechanic and a greenhorn, when an investment is made in an automobile, is that the mechanic brings to bear his previous knowledge of lubricants, and understands above all that the better the lubricant the better the automobile in every way.

The mechanic first of all looks to his bearing points. He wishes to know if the bearings are generous enough to carry the load. If they are, then he wants to know if the system for lubrication is correct. The greenhorn chiefly has in mind whether his gasoline tank is filled, although he sometimes forgets that, and then he has in mind that he must have water in the radiator, and that his ignition is effective. The matter of lubrication seldom bothers him. He knows that he has an engine base in which there is a quantity of oil, and that he has something in the way of an oiling system. He also knows that he has a differential and a transmission gear which are supposed to be loaded with grease. Often he loads his differential, or rather packs it, so thoroughly with grease that when it warms up, it is squeezed out, or if warm enough, flows out from his axles, gets on his brake bands, and he then wonders if it is the fault of the grease. Usually he thinks it is. If it is graphite grease and the graphite thoroughly lubricates his brake bands, so that he cannot stop within a mile of where he wants to, he condemns graphite at once, and sometimes with language that burns the air.

Your real mechanic is sometimes a hard man to convince, but when you do convince him, that finely powdered flake graphite is the real thing to use on any bearing surface, you have achieved something worth while. You have a friend for life, and that probably is the reason why there are over 250 railway companies making use of Dixon's Flake Graphite for lubricating purposes.

By a systematic campaign, the Dixon Company has made a lot of good friends among the engineers, mine managers, superintendents, mill men, and other logical customers in the mechanical field.

The expert drivers of the racing automobile are usually mechanical men. They are selected because of their mechanical knowledge, and it is probably safe to say that 90% of the expert drivers in the United States are making use of Dixon's Flake Graphite Automobile Lubricants.

"MADE IN JERSEY CITY"

One Article Made in Jersey City gets the Protection of the Courts

The Smooth-On Manufacturing Company of Jersey City, manufacturers of the well known iron cements, brought suit against the Chattanooga Iron Smoother Company of Chattanooga, Tennessee, for imprint infringement on their trade mark "Smooth-On" by the use of the name upon a similar article. A decree in favor of the Smooth-On Manufacturing Company of Jersey City was entered by consent, wherein the Chattanooga Iron Smoother Company were enjoined "from manufacturing, selling, advertising or offering for sale any iron cement or other similar product under the name "Iron Smoother," or under any other name simulating the trade mark of the complainant."

PRICE PROTECTION

The *Scientific American* has been printing some interesting letters on the subject of price protection, or as it is better known, price maintenance.

The Lowe Brothers Company of Dayton, Ohio, manufacturers of paints and varnishes, believe in the principle of retail price maintenance because they consider it the best way to assure absolute fairness to consumer, retailer and manufacturer. It is their belief that such maintenance does not mean monopoly and then further claim that experience proves that well sustained prices on well known and dependable products means lower and fairer cost to the user on general products.

The Globe-Wernicke Company, Cincinnati, Ohio, manufacturers of letter files and office appliances, believe that the invariable desire of the manufacturer is to make the selling price to the public, especially of unpatented goods, as low as possible, fixing the profit of the dealer as small as the dealer can be satisfied with, in order that his goods may move freely, and that where a dealer has the exclusive agency for an advertised line of goods (unpatented) he usually undertakes and of necessity does carry a suitable stock of such goods; and as the manufacturer does not sell the same goods to anyone else in the same city, and does not himself sell goods direct to consumers at cut prices, the dealer is assured of his legitimate profit.

If, however, the manufacturer is compelled to sell other dealers in the same city, or is forbidden by law to fix the price at which the goods are to be sold, the dealer no longer has an incentive to carry a stock of goods, and in a short time it comes about that no one in that city will carry a stock of goods because there is no profit in handling them.

Yawman & Erbe Manufacturing Company, Rochester, N. Y., manufacturers of files and office appliances, believe that the manufacturer should say at what price the retailer shall sell his product, and the law must compel the retailer to do this *to protect the consumer*.

They claim stores cut prices on certain advertised articles to attract trade on other articles, the profits on which yield an abnormal profit, that is, a profit that will cover the loss on the advertised article sold at a cut price. For that reason the consumer has been misled and deceived, and the manufacturer's business has been injured, for other retailers who desire to sell his goods at a living profit will not handle an article which they cannot sell at full profit.

The company also points to the fact that if two manufacturers of a similar article get together and agree to sell their goods at the same figure, that would be an act in restraint of trade. But when one manufacturer seeks to fix his own price, other manufacturers of the same thing may fix their prices a little lower, if they wish to.

Stephen F. Whitman & Son, Inc., Philadelphia, manufacturers of confectionery, believe that the maintenance of uniform retail prices on advertised articles, whether patented or not, would be to the best interests of the public, the retail dealer and the manufacturer. Their position agrees with that taken by Mr. L. S. Brandeis in an address delivered in New York, May 14, at a dinner given by the Association of National Advertising Managers.

They believe that when by means of their own publicity campaign they create a demand, they should have a legal

right to fix the retail price, and the law should protect them and the public and the average dealer against the price cutter, especially when they ask us to bear in mind that the price is fair, based upon the cost of producing the article, and is in direct and full competition with every other article of the kind on the market.

At the same time they expressly say that they do not believe that any retail price should be protected that is not regulated by full and free competition. That is, they do not believe that manufacturers or trusts should be permitted to fix high prices by eliminating competition, nor should they be permitted by temporarily cutting prices to destroy the business of smaller competitors, which is their usual method of securing a monopoly.

Messrs. Cheney Brothers, South Manchester, Conn., manufacturers of silks, believe that the present American legislation and court decisions on price maintenance are made under a misapprehension of facts, and that the purposes which it is intended to accomplish by such activities, will not be covered, but quite the reverse. All legislation, they say, along such lines has been advocated upon the ground that it would prevent monopolies and trusts from having undue profits. As a matter of fact, these great organizations will escape, because practically all of the great trusts have their own distribution. It will be the small concerns and those doing an honest and legitimate business, attempting to do nothing except to protect their customers from unfair competition and to maintain the quality and standard of their products, who will suffer. It will be impossible for any person having a known brand and reputation for quality, to maintain its quality if he is not allowed to protect the price at which such merchandise is resold. It will be used as a "football" by the great department stores and mail order houses, who ask nothing better than the opportunity to sell something of known standard for a less price than it can be sold at by anybody else, no matter whether they make a profit on it or not, in order to attract customers for less worthy merchandise.

They add that there is fast arising in the United States a situation which it will be much more important for the Government to control than the producing trusts. The most oppressive of all trusts would be a distributing trust, which would have control of and tyrannize over all small producers. There are today in the United States five dry goods retailers, and each distributes over \$25,000,000 worth of merchandise a year, not to mention mail order houses that do a business covering everything from barbed wire to a handerchief.

The real menace of the United States today is price cutting, not price maintenance.

WE READ in a London despatch that Major Hurst, a well known student of eugenics, claims that all mankind may be divided into those who are red-haired and those who are not red-haired. He finds that in almost every case of a red-haired child, that somewhere back there is a red-haired ancestor. The major also states that it is a popular fallacy that red-haired persons have any distinctive temperament. He has not found that red hair and a hasty temper go together, and he does not think it is so. He knows of a family where six out of twelve are red-haired, and the red-haired ones are no more fiery tempered than the rest. So much for superstition.

"MUCKRAKING THE MANUFACTURERS"

The above is the heading of an editorial comment in *American Industries*, and the following is the article in full:

"A vicious political attack on the National Association of Manufacturers, in which the activities of the association are misrepresented and its officials maligned, having been made by a scandal-mongering newspaper, based on a mass of miscellaneous papers sold to it by a discredited ex-employee of the association, we devote some space in this issue to the developments up to date, including the proceedings of the Senate Investigating Committee. An official statement by Col. George Pope, President of the National Association of Manufacturers, indicating the position of the association, is printed for the benefit of members and the public generally. To date only accusations have been brought forward and no opportunity has been afforded the association to controvert them, cross-examination of Mr. Mulhall being denied the counsel of the association, among whom Robert McCarter, former Attorney-General of New Jersey, has been retained, outside of printed questions that are to be submitted to the Senate Committee to use at its discretion. The National Association of Manufacturers has placed at the disposal of the Senate and House its complete letter files and provided clerks to facilitate examination of the same. As an indication of the intention of the association to demand accounting of its calumniators, it may be noted that a \$500,000 action for libel has been entered against the Philadelphia *North American*. In due course *American Industries* will treat the Mulhall case and its developments in detail, describing the operations of the National Association of Manufacturers and the necessities which called into being their activities against the persuasive lobbying of the American Federation of Labor in favor of legislation calculated to hamstring American manufacturing."

"AN OLD SOLDIER"

We have presented us by our branch manager, Mr. H. A. Van Derslice of St. Louis, what he terms "an old soldier." It is the remains of a Dixon S round lead pencil. The proud owner of this stub only parted with it on being given another one of the same grade, first assuring himself that it really was of the same grade and quality.

The remaining three inches of the "old soldier" shows that not only had it plenty of work to do, but has also been subjected to more or less abuse, and has received first aid to the injured on several occasions. It has been chewed until it split at the end, exposing about an inch of the bare lead and losing one-half of the wood. In fact, it would have probably split all the way down had it not been for the first aid to the injured, which consists in goodness knows how many thin red rubber bands which encircle it and hold in a tight embrace the lead and the wooden sides. It will go into the museum of the Pencil Department.

THE FOLLOWING will be useful to the driver of a motor car or a motor cycle:

Miler per hour \times 1.467 = feet per second.
 " " " \times 88.02 = feet per second.
 " " " \times 29.34 = yards per minute.

LEAKY THOUGHTS

Since fountain pens that nought contain

Can quickly fill themselves with ink,

Won't some one please invent a brain

That quickly fills itself with think?

—FRANK R. WALTON in *Chicago Record-Herald*.

We have these brains, self-filling

But like pens, they're always spilling.

Better a Dixon Pencil to have and use

Than inky thoughts to spoil a muse.

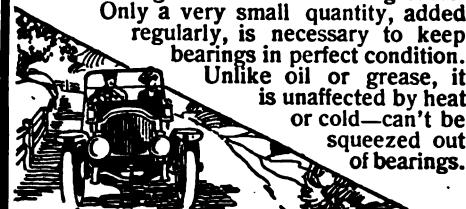
The Lubricant for Your Car

Flake Graphite is acknowledged an ideal lubricant, because it produces on bearing surfaces a marvelously smooth and durable veneer that actually holds the metal surfaces apart. Friction is reduced to a minimum—bearing surfaces can't cut or seize—when you use Dixon's Graphite, a wonderfully unctuous graphite of extraordinary softness and lubricating qualities.

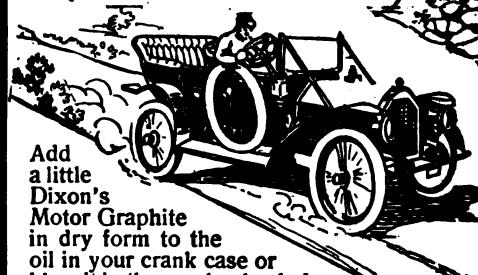
Dixon's Motor Graphite increases the lubricating value of oils and greases.

Only a very small quantity, added regularly, is necessary to keep bearings in perfect condition.

Unlike oil or grease, it is unaffected by heat or cold—can't be squeezed out of bearings.



DIXON'S MotorGraphite (Pulverized Flake)



Add a little Dixon's Motor Graphite in dry form to the oil in your crank case or blow it in the spark-plug hole. It will increase compression and give you more power from a smoother running engine.

Mix it with your own choice of lubricants or we will do it for you, as we manufacture a full line of greases containing Dixon's Motor Graphite.

Ask your dealer for Dixon's Graphite Lubricant No. 677—a highest quality mineral grease scientifically combined with Dixon's Motor Graphite. Fine for differentials or transmissions. More economical than plain oil or grease.

Send name and model of car for free book, "Lubricating the Motor."

JOSEPH DIXON CRUCIBLE COMPANY

Established in 1827

JERSEY CITY, NEW JERSEY



GRAPHITE



VOL. XV.

NOVEMBER, 1913.

No. 11.

Issued in the interest of Dixon's Graphite Productions, and for the purpose of establishing a better understanding in regard to the different forms of Graphite and their respective uses.

THE FACTORY

Grim, stern and smoky it stands against the sky. Its high stacks seem to seek the clouds. The streaked roof is framed in an atmosphere of smoke and steam.

The whirl of the wheels fills the air. Busy hands are moving under the direction of keen-cut eyes. The faces of the workers reveal intentness of purpose, knowledge of the craft and serenity with work well done.

This is the factory. Perhaps it has made the town. Usually it has, for, as Mr. J. Le Roy Tope has well said: "Over the gate to growth and glory of every city must be inscribed the words: 'A monument to them who buildeth factories here.'"

Out of the 229 cities of this country having 25,000 or more population, about seventy per cent. are in the manufacturing section. Mr. Tope says sixty-three per cent. of all the people live in cities and are the buyers who distribute population and prosperity to their cities.

And who built the factory? Who took the venture of failure or success? The employes who keep the place busy and share the burden of the industry? No. It was the man with money, the capitalist. He took the risk. He could have put his money in the savings bank or loaned it to his neighbors on their farms or houses and rested in comfort without anxiety, but he took the chances of the investment.

Perhaps he had been a working man. In all probability he had. Accumulating his savings, and inspired by an ambition to be his own employer, to prove his ability rather than to store up wealth, he had waited for the opportunity to venture in business by himself or with others. Watching and waiting, and finally finding his opportunity, and taking advantage of it, he risked his savings and the factory rose.

Perhaps after a time, as his business increased, it developed into wider lines until it reached a magnitude surpassing anticipation. Perhaps ultimately, the successful head of the enterprise, meeting growing competition from the domestic and the foreign producer, and realizing the value of concentration and efficiency, combined his establishment with others and thus created a magnificent corporation, employing thousands instead of hundreds and requiring millions of capital instead of tens of thousands.

Then the city took on the appearance of a metropolis. Suburban property was divided into city lots and farms into villa sites. Rows of new dwellings stretched out into the fields where the flowers grew. Shops multiplied and everybody shared in the general prosperity.

This is the history of many an American city. It is the tale of every city that has been conspicuously prosperous. And who brought this prosperity? Capital or labor? It was both. Woe betide those who fail to comprehend the mutual dependence of these upon each other!

And wrath upon wrath to him who dare raise a hand to endanger the victory that labor and capital united have won, in this favored land of freedom and equal opportunity.

Let capital always be considered. Let labor always be conservative. Let no mischievous hand foment trouble. Capital gets its greatest rewards when labor is most efficient. The best friends of labor are the men they work for and with.

And remember that a demagogue never filled a pay envelope!
—Leslie's Weekly.

FAKE ADVERTISING

The United States government is just now engaged in luring men into the army and navy under false pretenses, says the *St. Louis Times*.

There was a time when the government told the boys of the country when they should join the navy and army for patriotic purposes. It was the greatest army and greatest navy in the world, and they backed the greatest country in the world, this last phase of the statement being entirely true.

Just now, however, the billboards print flaming pictures, idealizing life on land and sea, making first and foremost the point that there is much travel and no expenses to be paid.

It is a lure of the loafer.

The pictures accompanying the lure are untruthful, they present life as it is not and they leave out of the story all of the evidences of rough work that every soldier and sailor must have.

In other words, the United States government is covering the billboards of this country with fake advertising which has the effect of committing a fraud upon the young men to whom the appeal is made.

GROSS CARELESSNESS

"Bill's going to sue the company for damages."

"Why, what did they do to him?"

"They blew the quittin' whistle when 'e was carryin' a 'eavy piece of iron, and 'e dropped it on 'is foot."

ESTABLISHED 1827



INCORPORATED 1868



JOSEPH DIXON CRUCIBLE CO.

JERSEY CITY, N. J., U. S. A.

**Miners, Importers and Manufacturers of Graphite,
Plumbago, Black Lead.**

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ST. LOUIS OFFICE, 501 Victoria Building.

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BUFFALO OFFICE, 72 Erie County Savings Bank Building.

ATLANTA OFFICE, Fourth National Bank Building.

EUROPEAN AGENTS,

Graphite Products, Ltd., 218-220 Queen's Road, Battersea, London.

SOUTH AMERICAN AGENT,

Alfredo J. Eichler, 666 Calle Cangallo, Buenos Aires, Argentine.

CUBAN AGENTS,

For all Products Except Dixon's American Graphite Pencils

Croft & Prentiss, Room 424 Lonja Building, Havana.

For Dixon's American Graphite Pencils.

Harvey & Harvey, Empedrado 30, Havana.

THROWING DUST

"A little learning is a dangerous thing," and this is particularly apt in the lubrication field. It is interesting to note what one of our "would be" competitors says in regard to graphite.

"Graphite mixed in any form with oils or greases does not assist the lubricant in performing its work in the right direction, that of relieving friction, because it will not resist the pressure of gears under mesh, causing the metal surfaces to rub upon

each other. Graphite grease in any form also produces a certain amount of carbon.

"Graphite lubricants clog up oil channels so that nothing can get in after them. In tests made not long ago at Cornell University, graphite filled oil passages so that it was necessary to remove it with a piece of metal.

"Another objection to graphite is that metal and graphite mix together. Any chips or metal particles that get into the lubricant stay there, forming an abrasive which grinds into the metal surface instead of being precipitated to the bottom as with ——— goods. In one instance of this kind we know, the gear housing was cut one-eighth inch deep by chips in less than two months."

Can you have much faith in goods produced by people who publish such rot?

Either the writer of the above was unfamiliar with his subject or deliberately intended to make a false statement in hope of fooling a few uninformed persons. To our mind it is a pitiful exhibition of ignorance about graphite and lubrication in general, and an insult to intelligent engineers who use graphite every day, because it does the very things Mr. Greaseman claims it will not do. The statements in paragraph one and three are absolutely untrue, and paragraph two is also untrue when graphite is used properly.

CONCERNING THE LUBRICATION OF AUTOMOBILE CHAINS

In "Self-Propelled Vehicles" by Homans, there are many suggestions for properly caring for an automobile. The following recommendation is given for cleaning driving chains.

"After removing the chain, cleanse first in boiling water, then in gasoline, in order to remove all grease and dirt whatever. Any break or defect may now be plainly discovered and should be remedied by inserting new links for those disabled. The common practice is then to boil the chain for about half an hour in mutton tallow, which is thereby permitted to penetrate oil chinks between rolling surfaces, forming an excellent inside lubricant. After boiling, the chain is hung up until thoroughly cool, at which time the tallow is hardened. It may then be wiped off clean and treated with a preparation of graphite or a graphite-alcohol solution on its inner surface.

"Some authorities recommend that the chain, after it is cleaned, should be soaked, first, in melted paraffin for an hour at least, and then in a mixture of melted mutton tallow and graphite. After each soaking, it is dried and wiped clean.

"With either process, a daily application of graphite chain preparation is most desirable."

Our own recommendation has always been that the only way to properly lubricate a chain is to immerse it in a melted graphite preparation so as to thoroughly coat the pivots with a graphite bushing, as it were, and thus greatly lengthen the life of the chain. The outside of the chain being dry will not collect grit, which is bound to occur when oil or grease are simply smeared on the outside of the chain. Dixon's Graphite Motor Chain Compound is prepared especially for this purpose and is far superior to anything else on the market. When it is borne in mind that a single treatment of the chain will last for about 1000 miles, the trouble of having to remove the chain to apply the lubricant is not so objectionable.

WASTING TIME

Enraptured, they gazed, hand in hand, upon the beautiful scene stretched before them in the setting sun. 'Twas the lake district, and they but three days upon their honeymoon.

"Dearest," he said, gazing at her fondly, "isn't this heavenly?"

"Yes, Reginald," she softly murmured.

"Do you know," he whispered ardently, "to me life does not seem long enough for our happiness? Just think, even if we are fortunate, our married life can hardly last longer than fifty years."

"Is that all?" she queried, wonderingly, edging nearer.

"Yes, that's so," a touch of sadness in his voice. "Only fifty years in which to love each other."

"Then kiss me quick, Reginald," she exclaimed, "we're wasting time."—*London Answers.*

AIR CYLINDER LUBRICATION

In a pamphlet issued by the Fidelity and Casualty Company relating to the method of lubricating air compressor cylinders, we find the following which should prove of interest, as it points out safe and unsafe procedures:

"Recent disastrous explosions in air compressor systems present striking examples of the danger existing from use of ordinary engine oil in the air cylinders of air compressors. Only a pure mineral oil, with a flash point as high as good lubricating qualities will permit, should be used. An excessive amount of oil should be kept out of the system.

"Numerous cylinder oils are compounded, and such oils are likely to produce a carbon that will stick the valves, and collect on the valve faces and other parts of the cylinder and valve chambers, resulting in a danger condition.

"Air receivers are liable to explosion from accumulated oil deposits. Every receiver should be equipped with a pressure gauge, a safety valve, and proper drains, and all reservoirs and likely places of deposit in the air line should be thoroughly and frequently drained and cleaned. It is bad practice to have the inlet of an air compressor taken from a hot or dusty room—the air should be cool and as clean as possible.

"The practice of throwing kerosene oil into the inlet of an air compressor to clean it is an extremely dangerous one, and the cause of an explosion under such circumstances is not difficult to understand. Lubrication of the air cylinder with soapsuds (preferably made of soft soap, about one part to fifteen parts water) for a few hours each week (or less frequently if the load is light), instead of oil, will help very materially in keeping the cylinder clean. The only danger from the use of soapsuds is rust, and this should be overcome by being careful to discard the soap and feed the cylinder with oil an hour or so before shutting down. The receiver blow-off should then be opened and the accumulation of oil and water drained off.

"An air compressor engine should not be controlled by the air pressure alone, as many are, but should be fitted with an auxiliary governor which will act as soon as the speed rises above a certain predetermined limit. This will prevent the engine from "racing," in case an accident to the tanks or piping causes a sudden lowering of the pressure. It is not necessary for an explosion to take place to produce a lowering of the pressure, as the giving way of a pipe, valve, or tank from any cause will have the same effect.

"The steel used in the construction of air receivers should be of the best quality, and should have a tensile strength of from 55,000 pound to 62,000 pound per square inch. The side seams should be double-riveted, or better still, be butt-strapped. The heads should be dished. The large sizes of receivers should be provided with man-holes."

To this we may add, that Dixon's Ticonderoga Flake Graphite as a cylinder lubricant presents many striking advantages that are further emphasized by the difficulties and dangers attendant upon air compressor operation.

Flake graphite is unaffected by high temperatures.

It cannot be "carbonized" or ignited.

It cannot possibly give off explosive vapors.

It will not accumulate dust or grit.

It will not clog discharge valves.

It permits a great reduction of oil supply.

It may prevent receiver explosions.

It improves piston fit and lessens friction.

It saves oil, repairs, trouble and money.

We have a special pamphlet, entitled "Air Compressor Lubrication," which is well worth the careful reading of any one interested in, or who may operate, air compressors.

ADVICE TO LINOTYPE OPERATORS

In the latest issue of that bright and interesting house organ of the Mergenthaler Linotype Company, *The Linotype Bulletin*, some good hints are given to linotype operators and machinists. Concerning the care of spacebands the *Bulletin* says:

"Spacebands should, of course, be cleaned every day. Rub each spaceband on a graphited board, up and down—not sideways or with a circular motion, as that will wear off the sharp edges, which are essential for a close lock-up between the spacebands and matrices."

The *Bulletin* also says:

"Do not wash matrices in benzine. Clean them on a rubbing board as follows: Place a very small quantity of graphite on the board, which should have a level glazed surface. Put the matrix flat on the board, and rub it gently and firmly on both sides, as if to polish it. Matrices should always be rubbed before being put into the magazine, and the most used sorts should be rubbed once every week for four or five weeks, and then occasionally afterwards, say, once a month. This rubbing will clean the matrices and put a polish on them—thus preventing the adherence of particles of metal, which causes the matrices to wear unduly."

To which may be added our own advice to operators and machinists to use only Dixon's Graphite No. 635, because for years it has proven its superiority for all linotype work.

SOME WEEKS AGO Jersey City experienced its most destructive and largest fire. The city's entire fire apparatus was called into use. So rapidly did the flames move that one fire engine was unable to get away and was partly destroyed. The engines were called upon to pump water on the ruins for several days in succession, and several observing friends reminded us that each engine had close at hand a can of Dixon's Graphite Lubricant, which fact, they were pleased to say, probably accounted for the smooth working of all the engines. We have no doubt of it.



**IROQUOIS NATURAL GAS COMPANY'S BUILDING,
BUFFALO, N. Y.**

The substantial structure illustrated on this page is the Iroquois Natural Gas Company's Building, Buffalo, N. Y. It is one of the many structures planned by Wood and Bradney, Architects, of Buffalo, and is a fine type of modern steel and concrete construction. The steel contained in the superstructure was fabricated by the Buffalo Structural Steel Company, erected by J. A. Fitzpatrick, Inc., and painted with Dixon's Silica-Graphite Paint.

The Iroquois Natural Gas Company's Building is a notable addition to the number of structures in Buffalo painted with Dixon's Silica-Graphite Paint. Buffalo and scores of other cities are represented in a notable building list issued by the Dixon Company and sent upon request to those who are interested in better protection for steel work and all other kinds of metal surfaces. May we send a copy of this booklet to your address?

A TOBACCO merchant makes his will in favor of his grandson on condition the grandson never smokes paper cigarettes. Must be something mean in cigarettes, after all.

QUESTION!

Question! "Is this true? Is it fair?" This is the question written by one of our most thoughtful captains of industry on the margin of a double page cartoon from the recent issue of a prominent publication. The picture shows three gigantic monsters marked "Greed," "Gain," and "Gold" sitting over a highway leading to a factory along which little children are marching to the "Mills of the Gods." It is a fair question to ask if this be true. It is also fair to emphasize the further inquiry of the captain of industry who asks in his marginal note: "Why brand all industry? Why not insist that attacks be specific and true?" We look at the publication which makes this attack on the industries of the country and find its advertising pages filled with the announcements of some of our most successful manufacturing enterprises. If these patrons of our contemporary are filled with the lust of "greed, gain and gold," they should be spewed out of the mouths of every decent publication. Their cash is tainted.

The above is an editorial in *Leslie's Weekly* of October 2. The Dixon Company received copy of the double page cartoon referred to and probably many other manufacturers have also received copies. The question is well put.

PEAN TO A PEANUT

Knowing the predilection of the staff of our Atlanta branch for possum and baked sweets and other joys of the South, we print the following from the *Atlanta Journal*.

Let others roast thee—Peanut, I shall praise
Thee, as a succulent and shapely thing;
I love thine unpremeditated ways,
Thy manner, coy, cute, and unquestioning.

O Nut, sublimely indigestible,
Too long thy merits have been unsung;
For neither minstrel, bard, nor oracle,
In thy behalf hath wagged the silver tongue.

The cautious cantaloupe, that fickle fruit;
The odoriferous onion, fraught with tears;
The prune, impervious to the gentle loot,
Assuage, but ne'er provoke my thirst for beers.

So, crooning Peanut, let me drink thy praise,
For thou of all things makest me most dry.
Please parch my pleading palate all my days,
And in a peanut orchard let me die.

AGE MAKES EFFICIENCY

Right on top of the statement of George F. Baer that at seventy he feels more useful to the Reading Railroad, and in the wake of Dr. Wiley's statement that at sixty a man is at his best, comes the hard statement of fact that the Pennsylvania lines have in active service today more than four thousand employes who are between sixty and seventy years of age.

It is admitted that railroads demand efficiency first of all, and that neither "pull" nor sentiment would keep these four thousand men at work unless they were doing what they are paid for doing in a manner satisfactory to their foremen, their superintendents and their directors. Moreover, as soon as an employe of the Pennsylvania Railroad, or of many other railroads, finds he is failing, he applies for a pension and gets it. There are on the pay roll or the pension list of the Pennsylvania Company nearly five hundred men who retired after they had given to the corporation fifty years of honest and faithful service.—*New York Herald*.

TRAINING AN ORIENTAL

A Canadian woman wanted to show her Chinese servant the correct way to announce visitors, and one afternoon went outside her front door, rang the bell and made the man usher her into the drawing room.

The following afternoon the bell rang and not hearing him answer it, she went to the door herself. To her surprise, he was standing waiting outside.

"Why, Sing," she asked, "what are you doing here?"
"You foolee me yesteddy. I foolee you today," was his reply.—*Punch*.

HAWAII? PRETTY WELL, THANK YOU

"My wife has gone to the West Indies."
"Jamaica?"
"No, she left of her own accord."

JUST TALC AND GRAPHITE

Mr. L. Greenwald, of the Firestone Tire and Rubber Company, is quoted in a recent issue of *Horseless Age* as saying in connection with the lubrication of inner tubes that "powdered graphite is not quite so nice to handle as talc, but it is a much more valuable lubricant. If too much talc is used and any water should work its way into the inside of the tire, there is danger of grit and attending injury to the tire." To Mr. Greenwald's remarks may be added that with the use of flake graphite as an inner tube lubricant, the motorist is less frequently troubled with blow-outs. The Dixon Company will be glad to send to any motorist an interesting folder on the subject of graphite for inner tubes and wheel rims.

HE WANTED TO KNOW

A man got in a cab at the Richmond railway station and said:

"Drive me to a haberdasher's."

"Yaas, suh," said the driver, and whipped up his horse and drove a block; then, leaning over to address his passenger, said:

"'Scuse me, boss, but whar d' yu say you wanter go?"

"To a haberdasher's."

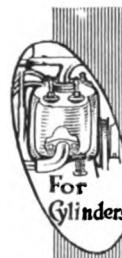
"Yaas, suh, yaas suh." After another block there was the same performance.

"'Scuse me, boss, but whar d' say yu wanter go?"

"To a haberdasher's," was the somewhat impatient reply. Then came the final appeal:

"Now, look a-here, boss, I be'n drivin' in dis town twenty years,' and I ain't never giv nobody away yit. Now you jes' tell dis niggar whar 't is you wanter go."—*Century Magazine*.

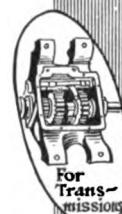
DIXON'S graphite publications sent free upon request.



Good for Every Part of Your Car

Polish a piece of metal and it will still show up rough under the microscope. This roughness is the cause of friction.

Dixon's Motor Graphite covers up this roughness with a marvellously smooth and durable veneer that is almost frictionless.

DIXON'S
Motor Graphite
(Pulverized Flake)

Mix it with your own choice of lubricants, or we will do it for you, as we manufacture a full line of greases containing Dixon's Motor Graphite.

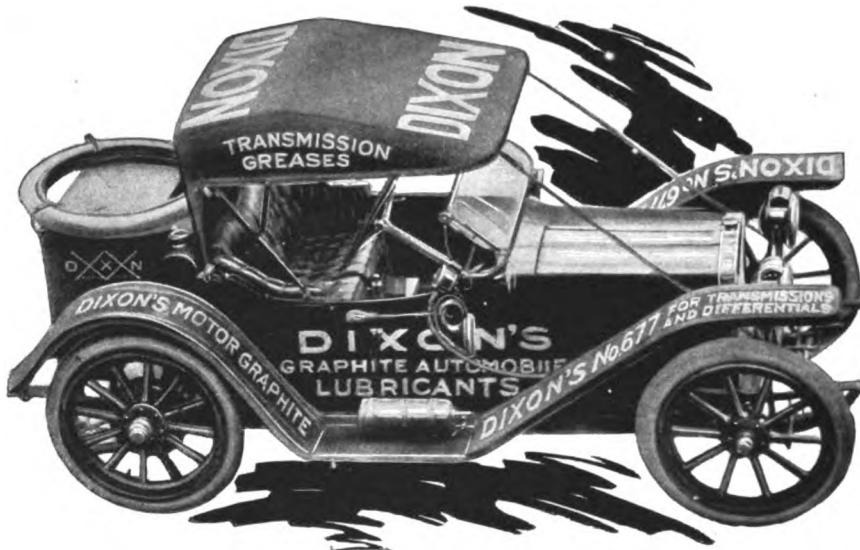
Ask your Dealer for Dixon's Graphite Grease No. 677—for differentials and transmissions. More economical than plain oil or grease.



Send your name and model of car for free Book, "Lubricating the Motor."

Joseph Dixon Crucible Co.
Established in 1827
Jersey City New Jersey





THE BUSINESS AUTOMOBILE

Painted a vivid red and with prominent signs in black, fore and aft, on starboard and on larboard, and on the top, the Dixon new commercial automobile is touring through the New York City territory, which is managed by Mr. John M. Ready—that is, the New York territory is managed by Mr. Ready and not the automobile. The automobile and the distribution of advertising matter and samples is under the care of Mr. A. G. Thomson and his staff of active salesmen and drivers.

For the past month or two an active advertising campaign in the Metropolitan newspapers has been under way and has been followed up by most excellent work on the part of Mr. Thomson and his men, supplemented also by effective circular work and letter writing under the direction of Mr. L. H. Snyder, head of the Lubricating Department at the general office in Jersey City.

Through this campaign the Dixon Company has very successfully reached automobile owners, dealers and garages, with the result that those who knew of Dixon's Graphite Automobile Lubricants, now know them better, and those who knew them not, now know them, and better than all, the benefit that comes from the use of Dixon's Graphite Lubricants is now not confined to the favored few, comparatively speaking, who knew them, but rather possessed and appreciated by thousands who needed them, but knew them not.

SHOE SIZES

There was a time when we thought we knew what size shoe we wore, and if we did not, all we had to do was to look inside and find out. Now we are told that because ninety-nine adults out of every one hundred are unwilling to buy shoes that are long enough and wide enough to fit their feet comfortably, the shoe manufacturers use code markings that are unintelligible to the laymen. This tendency to buy small shoes is characteristic of Americans, according to one merchant, but in New York more than anywhere else there is a desire to traverse the walks of life and leave behind as small footprints as possible. Often the customer will want a size that the salesman can see at once will be too short or too narrow. If there is any argument there is a lost sale, and it is for this reason that plain

marking of lengths and widths of shoes is avoided, and numerous codes have come into existence within the last few years that have completely put the average layman out of the running when it comes to telling the size of the shoes he is having fitted.

This using of code marking is due largely to the fact that there is no general standard last, despite the efforts of several of the leading manufacturers to have one established. One of the most practical codes used is the so-called "Western System." In this code the English width designations, AA, A, B, C, etc., are indicated by figures ranging from zero for AA to 5 for E. The length of the shoe is given plainly as 3, 4, or 5, with zero attached for whole sizes and 5 attached for half sizes. The whole code contains three figures, and by its use size $3\frac{1}{2}C$ would be marked 335. Size 7D would be marked 470, and so on.

FREAKS OF LIGHTNING

The good old-time belief that one of the safest places during a thunderstorm is on top of a featherbed, is not set aside by scientists as so many old-time beliefs are. In an article written by the well known astronomer Flammarion, we are told that a featherbed is an excellent refuge, that it is wise to remain within doors in time of storm. It is also prudent to close carefully doors and windows and not to be near walls and chimneys.

More people are killed by lightning than is commonly believed and the freaks of lightning are very peculiar. There is cited the case of a stroke of lightning falling on a herd of 1,800 sheep, throwing 1,200 to the ground and killing 556 in the twinkling of an eye. It should be added that these unfortunate quadrupeds were unluckily penned along an enclosure of iron wire. Two men sheltered under the belfry of a church were instantly killed and the belfry set afire, at the same time breaking the bell in two symmetrical pieces. The clothing from one of the men was completely removed by the lightning without any regard for the proprieties. In another instance, the lightning rendered mute a loquacious woman and restored speech to one who was dumb.

IT IS WISE to shut your eyes to a lot of things in this world—soap is one of them.

MISLEADING STATEMENTS

Plenty of them. They pop up on all sides—of a value to the engineering world that could be best expressed with a rimless cypher set at the right of the decimal point.

Scarcely a day will pass during which one of them has not presented itself at the power plant and presumed to become familiar with the man whose duty it is to keep the wheels turning.

About the most fluent of these is the patent medicine carbon brush agent, whose goods will run on any kind of a machine under any conditions, cure any trouble you ever had, won't squeak, spark, chatter, crack, tear, fray or run down at the heel.

There is such a marked contrast between claims of this class and the honest, straightforward statements offered in "Dixon's Graphite Brushes" that the little pamphlet should appeal to any engineer whose nerves are roughed up by the persistent racket, so often generated at the contact point of carbon brushes and copper bars.

The writer is an engineer and has been in intimate touch with conditions in the same plant, wherein graphite brushes produced results, also where they didn't, but to have one case wherein they will work, will bring pleasure that no engineer should let pass unsought.

In the majority of cases where carbon brushes must be used, they will chatter or screech persistently and at their best, the excessive wearing away of the commutator is a serious objection to them.

Carbon brushes are often soaked in mineral oil which affords temporary relief, but as soon as the oil has dried out the trouble returns.

Now, here is the point wherein Dixon's No. 2 Graphite does something else for me beside thrashing the scale out of the boilers.

On a 420 volt generator running 800 R. P. M., the brushes persistently chattered and squeaked and the much sought for "shine" was not forthcoming.

An experiment of some time ago has led up to a nice bright commutator, quiet, cool brushes; all that may be desired from that particular "organism."

The brushes were removed and all traces of copper cleaned off the "feet," and a pinch of No. 2 was sprinkled on and well rubbed in, applying considerable pressure to bring it down smooth.

The operation was repeated, morning and noon for a week and thereafter less frequently, as the condition of the commutator demanded.

The carbon appears to have absorbed the graphite, filling the pores and presenting a surface deliciously smooth, which has enhanced the formation of a fine, bright skin on the commutator.

The brushes are of $1\frac{1}{4}$ square inches area, the time consumed in treating the entire set of eighteen did not exceed twenty minutes per application, the last being over a month ago.

—H. I. H., NEW YORK.

FEW THINK of New York City as a place of much manufacturing and yet it is large in that way, there being six thousand five hundred raincoat makers alone—enough people to make a good sized city.

AN ERROR CORRECTED

In the October number of GRAPHITE on page 3648, the following appears:

Miles per hour x 1.467 = feet per second.
 " " " x 88.02 = feet per minute.
 " " " x 29.34 = yards per minute.

The second line should read "minute" instead of "second," which would make the rule read as follows:

Miles per hour x 1.467 = feet per second.
 " " " x 88.02 = feet per minute.
 " " " x 29.34 = yards per minute.

Our attention was called to this error by Mr. W. Johnson of New Haven, who is kind enough to add in his letter the following.

"I read GRAPHITE with interest each month, as I find it in the reading room of the Railroad Y. M. C. A. here, and think it a most meaty and interesting publication."

The Dixon Company is always grateful for courtesies of this kind, or for any contributions that may come to us that will be of interest to the readers of GRAPHITE.

In this particular instance a number of our readers noticed the error to which Mr. Johnson first drew our attention and while of course we are sorry to have printed a misstatement, we are indeed glad to know that GRAPHITE is read so carefully. Apparently our mistakes are few, for if otherwise our friends would not take the trouble to write us.

FARMING VS. AGRICULTURE

"Father," said Johnny, "what is the difference between farming and agriculture?"

"Well, my son; for farming you need a plow and a harrow and other implements, and for agriculture all you need is a pencil and a piece of paper."

Better Lubrication with Dixon's Motor Graphite

Here is how it works



Q Dixon's Motor Graphite goes direct to the cause of friction troubles—microscopic roughness. It fills in the minute depressions, becomes pinned upon the tiny projections, forming a thin, tough veneer of marvellous smoothness, which prevents metallic contact. Q This means less friction and wear—no more hot or cut bearings—more power from your engine and a smoother running car. Q Mix it with your own choice of lubricants, or we will do it for you, as we manufacture a full line of greases containing Dixon's Motor Graphite.

Ask your dealer for Dixon's Graphite Lubricant No. 677—a highest quality mineral grease scientifically combined with Dixon's Motor Graphite. Fine for differentials and transmissions. More economical than plain oil or grease.

Send name and model of car for free book,
"Lubricating the Motor."

Joseph Dixon Crucible
Company
Established in 1827

Jersey City New Jersey



**DIXON'S
MOTOR GRAPHITE**
(Pulverized Flake)

FLAKE GRAPHITE (?)

The other day we got a can of graphite labeled "Flake Graphite." We bought it because we were interested as to what kind of graphite it was.

On opening the can, a glance was enough to show that it was nothing but so much dirt and the cheapest of the cheap grades of amorphous graphite, in fact, like so much soot from a chimney.

We warn all purchasers of graphite to beware of the so-called flake graphite. It is these malicious tradings on the reputation of *Flake Graphite made by the Joseph Dixon Crucible Company*, which has retarded graphite lubrication from general adoption.

Remember, please, when you buy graphite, that all lubricating graphite is sold on the reputation made and sustained by the Joseph Dixon Crucible Company.

Remember, too, that all graphite is not lubricating graphite. There is as much difference in graphite as there is in oils. Who would think of using crude oil as a lubricant? Don't buy graphite put out by irresponsible and malicious traders who don't care a "cuss" what happens.

WE GOTCHA, BO! COME AGAIN!

NEWARK, N. J., Sept. 12, 1913.

Joseph Dixon Crucible Company,

Jersey City, N. J.

DEAR SIRS:—Just a few words to let you know what I have done with one pound and a half of Dixon's Pipe Joint Compound.

I just finished one hundred and forty joints of $1\frac{1}{4}$ inch steam connections, working under ninety pounds pressure, 3,400 square feet of heating surface in all, and not one leak. I can't help but let you know this good result. There never was anything to beat it and, believe me, I have done some heavy work in my time and have used all kinds of dopes. But you have them all beat a mile, take it from me, Steve.

With best luck for your compound, I am,

Yours very truly,

GEORGE M. CRAWLEY, JR.

ONE-CENT LETTER POSTAGE

Over forty million stamps of about the same color and size as the ordinary two-cent postage stamp have been distributed by the National One-Cent Letter Postage Association in its campaign for a one-cent letter postage rate. Hundreds of business houses are using these stamps upon their stationery.

The government can carry first class mail at one cent per ounce, and still make a profit, and the association therefore claims that the extra cent expended is in the nature of a direct tax.

During the past year the United States Post Office Department made a profit of over sixty million dollars on first class letter mail, while at the same time it experienced a loss of about the same sum on second class mail, under which classification hundreds of tons of magazines are sent broad-cast throughout the land.



The National One-Cent Letter Postage Association, located in Cleveland, O., George T. McIntosh, Secretary, offers to send stamps to any person interested in the movement, free of charge, and in any quantities desired, providing they are used in the manner indicated.

THE CHILL OF THE YEAR IS FELT BY THE OIL AND THE GREASE

To a large extent it is now the close season for the automobile tourist, but there are many who appreciate the snap of the cooler days and the joys of autumn and early winter riding and touring. The chill of the nights, however, stiffens the oil and grease lubricants to that extent that they fail to fully perform their functions. To the man who has the graphite habit and who has been making use of flake graphite lubricants there comes no chill that will make his bearings stick or drag. The veneer-like coating of graphite on the bearings makes starting and running easy.

SOMETIME AGO one of the New York papers made the statement that very few New Yorkers knew, or even cared to inform themselves, as to what is going on daily in New York City in the way of really wonderful improvements and enterprises. Many who pass up and down Broadway know, because they cannot help but observe, that something is going on beneath the surface, but have no idea of what the work is.

We wonder how many know that there is \$12,000,000 worth of copper buried under the streets of New York; that America carries on fourteen and a half billions of conversations by telephone yearly, which is two-thirds of all the world's talk by that instrument. Some of these things are told in *October St. Nicholas*. We are also told in this magazine about the great new steamer running by an oil engine—the "Diesel." This new engine saves thirty per cent. more energy than the steam engine. The method of ignition by compression also shows how squeezing the air in the cylinder raises the temperature to 1,000 degrees—which is as hot as red-hot iron.

"PROBLEM" BLOTTERS

The Diamond Cable Company of Burbon, Indiana, wholesale dealers in pure soft copper cable lightning rods, send us the following:

Please mail us a few of your "problem" blotters. We use Dixon's pencils and Dixon's lubricants, and here is another one for you.

A father left an estate to be divided equally among his children.

The oldest to receive \$100, and one tenth of the remainder.

The second " " \$200, " " " " " and so on, each child to receive \$100 more than the preceding one plus one tenth of what still remained.

How many children and how much did each receive?

To any one who will send us the answer, we will send in return one of Dixon's Anglo-Saxon Pencils.

THE ONE universal language in the world is that which money talks.

DON'TS

1. Don't be afraid to work; it is healthy physical and mental exercise.
2. Don't be afraid to hustle; be glad of the chance.
3. Don't be afraid of being turned down.
4. Don't be afraid to change a man's opinion; but be careful how you do it.
5. Don't be afraid of failure. Keep on, though you fail a dozen times.
6. Don't be afraid of difficult undertakings. Be glad of the opportunity to show your metal.
7. Don't be afraid of honest competition. It's competition that makes success worth while.
8. Don't be afraid to do more than is required of you.
9. Don't be afraid to play the game honestly. Honesty always wins out.
10. Don't be afraid that your efforts will not be appreciated.
11. Don't be afraid to go out of the way to do a good turn for a friend.
12. Don't be afraid to begin at the bottom. It is the safest way to climb.
13. Don't be afraid to think out new ways. Originality is appreciated.
14. Don't be afraid to do your best. The best is none too good.
15. Don't be afraid to tell the truth. It is a part of your honor.
16. Don't be afraid to think before you act.
17. Don't be afraid to use your time to advantage. It is given you for that purpose.
18. Don't be afraid of imitators. Originality always bears a trade mark.
19. Don't be afraid to risk. The great successes are born of chance.
20. Don't be afraid to admit when you are in the wrong.
21. Don't be afraid to obey. A man must learn to obey before he can hope to command.
22. Don't be afraid to help the boss. He who helps the boss helps himself.

THE INDISCREET PROFESSOR

Mrs. Nextdore—"Professor Adagio called at our house yesterday and my daughter played the piano for him. He just raved over her playing."

Mrs. Pepry—"How rude! Why could he not conceal his feelings the way the rest of us do?"

ELSEWHERE in GRAPHITE will be found an article entitled, "Misleading Statements," signed "H. I. H., New York." We are not at liberty to make use of the full name, but have pleasure in saying that the gentleman is a well-known operating engineer who has favored GRAPHITE with this article. To make use of a quotation from the manager of our Buffalo branch—"The Dixon Company's most cherished asset is the good will of their customers and that we get their business because they prefer to deal with us."

DIXON'S graphite publications sent free upon request.

FIXED AND UNIFORM PRICES

Mr. Mortimer W. Byers, Secretary of the National Association of Stationers and Manufacturers, makes the following suggestions in the matter of fixed and uniform prices:

(a) The consumer is better served when he buys an article at an established price, uniform to all. He does not fear and will not suffer from substitution if cut-prices are eliminated.

(b) The retailer can buy with confidence, if he knows that his competitor cannot undersell him, and thus the whole market for a given product is steadied and uniform distribution assured.

(c) Competition between manufacturers will render retail prices reasonable, the manufacturer who quotes too high a price will not be able to remain in business.

(d) Maintained prices are the only protection for the small merchant against powerful competitors of greater size, and trade pirates in general.

FUN IN THE HOUSE

While the members of the House of Representatives were having their discussion on the question whether goat hair was wool or not Representative Barnhart of Indiana took the floor and closed the goat incident with the following contribution to the gayety of a hot spring afternoon:

There was a man named Joseph Cable,
Who bought a goat just for his stable.
One day the goat, prone to dine,
Ate a red shirt right off the line.

Then Cable to the goat did say:
"Your time has come; you'll die this day."
And took him to the railroad track.
And bound him there upon his back.

The train then came; the whistle blew,
And the goat well knew his time was due;
But with a mighty shriek of pain
Coughed up the shirt and flagged the train.

GROWN FROM SEEDS OF SATISFACTION

THE J. C. ROBINSON SEED CO.

WATERLOO, NEB., Aug. 18, 1913.

Joseph Dixon Crucible Company,

Jersey City, N. J.

GENTLEMEN:—We are highly pleased with the graphite brushes which we are using on one of our motors, and below is an order for some more. They seem to have completely stopped all sparking, etc., on one of our most troublesome motors and we cannot say too much for them.

We have used your products, such as belt dressing, flake graphite, graphite greases, etc., for a long time and have been highly satisfied with them in every respect.

Yours truly,

L. R. ROBINSON.

OH! YOU CARPENTER!

If you want to see a saw that saws better than any saw you ever saw before, rub it over with Dixon's Graphite Lubricant.

FOR THE GOOD OF MEDDLERS

The funny Weather Man of the *New York Evening Telegram* says: There's been a lot of talk of the government butting into business. It seems to be general or catching. The *Wathena (Kan.) Times* runs this advertisement:—"To the Meddlers—I sold my house and suburban tract of about five acres to Mrs. Mary Stoeckler a few days ago on terms that were entirely satisfactory and agreeable to both of us. Location, situation and suitableness for her, all considered, probably it was as good a buy as she is likely to make and was putting her money where it would not get away from her and where it insured her a home and a living. A written and binding contract was signed, but as soon as it was known about town that the deal had been made certain jealous and interested parties began knocking, and one took the trouble to send word to a daughter of Mrs. Stoeckler in St. Louis to give her the impression that her mother had been skinned by me. As two different men stood ready to buy the land I told Mrs. Stoeckler I did not care to sell to her, under the circumstances, and she finally reluctantly returned the contract. If the meddlers who are so ready to butt in on the business affairs of others have any objections to me selling this property to some one else, I wish they would make it known now, for otherwise I am going to sell it." Nothing like publicity.

DRUNK ON BEEF TEA

A cable report is to the intent that Liverpool physicians are very much exercised over the case of a traveling salesman with delirium tremens induced by too much beef tea. Vegetarians base their most effective arguments on the fact that the stimulation from meat is in a way like that from alcohol, effecting tissue change or metabolism rather than affording nutriment. Beef tea is the highest stimulant among the meat juices. Physicians have long since abandoned the notion that it is a food capable of repairing tissue, for laboratory tests have proved that it causes more rapid wasting of the body than no food at all.

Dogs fed entirely on concentrated beef juice are so overstimulated that they die within a few days. Experiments conducted by the United States Department of Agriculture on losses in cooking meat showed that beef which has been used for the preparation of tea or broth had lost practically none of its nutritive value, while most of the "flavoring material"—the toxic and stimulating part of the beef—had gone into the extract.

Therefore, according to the *New York Times*, from which the above is taken, it is doubtful if the medical men of Liverpool are greatly surprised at the drummer's discovery of the hilarious consequences to be derived from beef juice.

A witness the other day made the statement that a man was drunk when he was paralyzed; that he was intoxicated when he acted like a fool and could not walk straight. And when asked how one could tell if a man was sober, he said it was simply a question of breath. Therefore, we presume that it will be a question of breath when a man claims that he is taking too much beef tea, or too much booze is suspected.

THE LOFTIER my thoughts become, the less is there to divide me from the humblest of my fellow creatures.—MAETERLINCK.

SEATTLE LIKES HER OWN

Out here we are close to Nature. We feel the ginger of the earth. Some of the bracing pitch of the firs of the forests is in the blood that warms us. Are our faces pink? The apothecary did not paint them. Are we strong? We have played with the cougars, chased the coyotes over the hills and whistled with the noble salmon. We eat red snow, and polish up with cedar oil. Are we happy? The green hills are smiling always. Puget Sound is a huge bit of liquid laughter. The snow peaks are cheerful. The sun romps up over the mountains in the morning and scampers playfully down the slopes in the evening. The moon is joyful. The stars sing for us. The winds are full of music. The trees are vibrant harps. The hedges and the meadows are mellow with the sweet things of life. Alaska is a perpetual beam of promise.—*Seattle Sun*.

GOING AFTER MORE BOILER SCALE

Mr. Asa P. Hyde, Chief Engineer of the Security Mutual Life Insurance Company Building, Binghamton, N. Y., is one of the many satisfied users of Dixon's Boiler Graphite No. 2. Some time ago he wrote us concerning the fine condition of his boilers since the graphite treatment had been in use. The following indicates that he has not as yet experienced a change of heart.

BINGHAMTON, N. Y., June 3, 1913.

Joseph Dixon Crucible Company,

Jersey City, N. J.

GENTLEMEN:—We have just cleaned our No. 1 boiler and it is in the best of condition. We have almost no scale now and what there is is not over a sixty-fourth inch thick, if there is that much. I have been advised to leave this very thin scale for the protection of the sheets and tubes, but I am going after it because I do not see what harm there can be when it is off, as we will then have a coating of graphite as a protection.

Very truly,

ASA P. HYDE,

Chief Engineer.

HE COULD TENDER ALL RIGHT

The sweet young thing was being shown through the locomotive works.

"What is that thing?" she asked, pointing with her dainty parasol.

"That," answered the guide, "is an engine boiler."

She was an up-to-date young lady and at once became interested. "And why do they boil engines?" she inquired again.

"To make the engine tender," politely replied the resourceful guide.—*New York Globe*.

AIR COMPRESSOR LUBRICATION

Concerning the lubrication of air compressors *The Colliery Engineer*, in reproducing a pamphlet issued by the Alabama Coal Operators' Association, makes the comment that "flake graphite mixed with the oil and fed into the machine has been found to be a very satisfactory and safe lubricant." The lubrication of air compressors is a subject treated very fully in a Dixon booklet which is sent upon request.

LITTLE THINGS

Little chunks of carbon,
Little grains of sand,
Make an auto engine
Pound to beat the band.
—*Chicago Evening Journal.*

Use the Dixon Graphite
There will be no grains of sand;
Then the auto engine
Will run to beat the band.

Little grains of graphite
Floating in the oil,
Spell the name of Dixon,
Save a lot of toil.

HERRN

YOCHS SICON ORNCIBLE
YENSEV

is an address which the postal authorities decided probably meant the Joseph Dixon Crucible Company, and so made delivery. The postal authorities judged correctly, as the communication was for the Dixon Company and came from the publisher of a German Technical Trade Journal. They advise us that "it becomes more and more difficult for users abroad to meet the right manufacturer for his special exigence and to buy to his advantage, owing to the proceeding specialization of our big works.

"We are willingly offering our help for this purpose without engagement or pay whatever on your side and may assure that you will save time and money by using our intermediation."

N. Y. SUN, OF COURSE

We are not grammatical sharks, as we have often remarked (and alas! too frequently demonstrated)—

But it shocks even us when Thomas R. Lounsherry, Emeritus Professor of English, Yale University, remarks, in the midst of an article on grammatical usages, in *Harper's* for September:

"It is obvious that *none* of these words *present* the slightest difficulty . . . "

And had it been any one but a professor of English we wouldn't have told on him.

THE OLD TIME theory was that when you saw a fellow tumble down and bump his nose, or anything of that kind, it was wrong to laugh at his misfortune. The scientists contend now that laughter at such a time is a beneficent provision, whereby a mass of minor sufferings which would otherwise depress humanity is turned into a stimulant, promoting well being bodily and mentally.

TIME

Too short a time have we to make our peace
Ere yet our life must close and cease;
Yet folly leads us to ignoble ways,
And darken the glory of our days.
—*Business Equipment Journal.*

BROWN TAXIS LUBRICATED WITH DIXON'S

UNIVERSAL TAXIMETER CAB CO.
153, 155 and 157 East 53d Street, New York.
April 19, 1913.

*Joseph Dixon Crucible Company,
Jersey City, N. J.*

GENTLEMEN:—We have used Dixon's Graphite Grease for some time and find that its lasting qualities and the superior service it gives, makes it by far the most economical lubricant we can use.

Your Graphite Grease has reduced the wear on the ball bearings in our transmissions to a surprising degree.

Yours very truly,

UNIVERSAL TAXIMETER CAB CO.
(Signed) A. C. LEETE.

HE-COW TOBACCO

Ng Poon Chew, a Chinese, said recently: "American advertising has reached China, even to the billboards. I know by the billboard pictures they have she-cows and he-cows, and the she-cows give milk, but the he-cows give tobacco."

—*Standard Advertising.*

WHEN Mark Twain, in his early days, was editor of a Missouri paper, a superstitious subscriber wrote to him saying that he had found a spider in his paper, and asking him whether that was a sign of good luck or bad. The humorist wrote him this answer and printed it:

"Old Subscriber: Finding a spider in your paper was neither good luck nor bad luck for you. The spider was merely looking over our paper to see which merchant is not advertising, so that he can go to that store, spin his web across the door and lead a life of undisturbed peace ever afterward."

DIXON'S
Graphite
Automobile
Lubricants

put the double-cross on that busy little jinx called "Friction."

Ask your dealer.

Made in JERSEY CITY, N. J., by the
JOSEPH DIXON CRUCIBLE CO.
Established in 1827

You Can't Slide Far in Hobnailed Shoes

DIXON'S GRAPHITE Automobile Lubricants

Made in JERSEY CITY, N. J., by the
Joseph Dixon Crucible Company
Established in 1827

THE reason is obvious. Equally clear are the facts about friction once you see the principle. Friction is the little jinx that wears out automobiles and puts money in the till of the repair man. Friction in bearings is caused by microscopic points, pits and pockmarks found even in the most highly polished steel. Oil and grease only film these irregularities, and under pressure or heat the oil or grease squeezes out or turns watery thin.

Dixon's selected flake graphite fills up these little irregularities, puts a smooth, oily veneer over the whole bearing and prevents metal-to-metal contact. It reduces friction to a minimum. It keeps cars out of the repair shop. It increases speed and safety. But you have got to know your graphite.

Dixon's selected flake graphite is the only graphite produced that has the necessary thinness of flake and absolute freedom from grit that totally prevents it from balling up or packing.

The Joseph Dixon Crucible Co. is the recognized authority on graphite. Every ounce of graphite sold by anyone is offered on the reputation of graphite established by the Joseph Dixon Crucible Co. Other makers of graphite greases are using this reputation to promote greases filled with impure graphite. Those who use these greases, rightly come to condemn graphite lubrication. We could not afford to risk the reputation of this old, old house on any article lacking absolute merit. Buy a can of **Dixon's Graphite Transmission and Differential Grease No. 677**, and see what a difference it will make in the running of your car.

Dixon's Graphite Automobile Lubricants are sold by all dealers who are in business to sell you service, who look to tomorrow as well as to the profit of today.

GRAPHITE

VOL. XV.

DECEMBER, 1913.

No. 12.

Issued in the interest of Dixon's Graphite Productions, and for the purpose of establishing a better understanding in regard to the different forms of Graphite and their respective uses.



NON-COLLEGE MEN

Herbert Spencer, one of the really great minds of modern times, declined the offer of an uncle to send him to Cambridge, and starting in at the age of seventeen, worked until he was twenty-six as an engineer on the London and Birmingham Railway.

It was he who enriched the theory of Darwin with the doctrine of the "survival of the fittest," and his influence on education has been more marked than that of any other man of his time.

The late Professor Vambrey of Budapest was the foremost of Oriental scholars. He could speak and write twelve Asiatic and nine European tongues. He wrote a whole library of books on philology and travel, but, as a writer in the Boston *Globe* lately

said, "he never went to college until he went there to teach."

Despite this, he was noted as being one of the boldest and most brilliant professors in the world. When he was the age of the average undergraduate he was working as a tailor's apprentice.

On this side of the water the Nestor of American writers, William Dean Howells, has no degrees save honorary ones. Yet no man in this country is more highly educated than he.

It is said that when he was editor of the *Atlantic Monthly* he was walking through the grounds of Harvard one day with James Russell Lowell. To the poet he expressed a regret at not having gone to college.

"That regret is unnecessary," said Lowell. "Had you gone to college you might have lost your originality, your fresh outlook on life. You might have become academic, imitative."

Another example of the uncolleged man is Jack London, the traveler and author whose work is so popular at present. London saved enough money to take him through college, but when he got there he thought the college did not provide enough opportunity for learning, so he left and matriculated in the school of the wide, wide world.

Elihu Burritt was one of the most learned men America has produced. Before he was thirty he had mastered fifty languages. Yet he was a blacksmith, whose "student's lamp was the forge and his desk an anvil."

—From the *Philadelphia North American*.

INTERESTING HISTORICAL REVIEW

Quite lately the members of the Lynn (Mass.) Historical Society had the long awaited pleasure of dedicating their new and well planned building owned by their society and devoted to its uses. Eminent and well known men assisted in the dedication, but that which was of special interest to the Dixon Company, and perhaps may be of interest to readers of GRAPHITE, is the following from the historical address by the president of the society, Mr. Charles J. H. Woodbury, SC. D.:

"Another great inventor in the utilization of the natural products of the earth was Joseph Dixon, an inventor in many lines, chief among which was that of the first utilization of graphite deposits in this country, making in his laboratory on Washington Street, first stove blacking, then crucibles, after that lead pencils and later the preparation of graphite for the lubrication of journals under great pressure."

Joseph Dixon was born in Marblehead, Mass., January 18, 1799, and died at Jersey City, N. J., June 14, 1869. The following extract from *Drake's American Biography*, gives some account of his numerous inventions.

"Dixon, Joseph, Inventor.—Before he was twenty-one he made a machine to cut files; afterwards he learned the printer's trade, that of wood engraving, then lithography, and became a thorough chemist, optician and photographer. He was probably the first to take a portrait by the camera; he first used the reflector, so that the subjects should not appear to be reversed. He built the first locomotive with wooden wheels, but with the same double crank now used. He originated the process of photolithography. To guard against abuses of this process, he invented the system of printing in colors on bank notes, and patented it—but never received any benefit, all the banks having used it without pay. He perfected the system of making collodion for the photographers, and aided Mr. Harrison in the mode of grinding lenses for common tubes. He is the father of the steel melting business in this country, is widely known as the originator of the plumbago crucible, as now made, and his establishment in Jersey City is the largest of its kind in the world."

Among other things beside the above, Mr. Dixon made a machine to cut devices on rollers used in calico printing, fast colors for calicoes and other fabrics, green ink for bank notes, improvements on daguerreotypes and photographs, devices for making lead pencils (the Dixon Pencils are among the best, if not the very best, made in this country), improvements in steamboats, used in Lynn in 1823, improvements in dyeing, in pyrotechnics and an organ to go by steam, water or weights.

ESTABLISHED 1827



INCORPORATED 1868

**JOSEPH DIXON CRUCIBLE CO.**

JERSEY CITY, N. J., U. S. A.

**Miners, Importers and Manufacturers of Graphite,
Plumbago, Black Lead.**

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PITTSBURGH OFFICE, Wabash Terminal Building

ST. LOUIS OFFICE, 501 Victoria Building.

BALTIMORE OFFICE, 1005 Union Trust Building.

BUFFALO OFFICE, 72 Erie County Savings Bank Building.

ATLANTA OFFICE, Fourth National Bank Building.

EUROPEAN AGENTS,

Graphite Products, Ltd., 218-220 Queen's Road, Battersea, London.

SOUTH AMERICAN AGENT,

Alfredo J. Eichler, 666 Calle Cangallo, Buenos Aires, Argentine.

CUBAN AGENTS,

For all Products Except Dixon's American Graphite Pencils

Croft & Prentiss, Room 424 Lonja Building, Havana.

For Dixon's American Graphite Pencils.

Harvey & Harvey, Empedrado 30, Havana.

WHAT GRAPHITE FOR LUBRICATION?

Hon. Elihu Root says questions of general and permanent importance are seldom finally settled. This statement may be quite true, but judging from the world-wide adoption of graphite as a lubricant, the question whether graphite is or is not a lubricant, seems to be definitely settled. The question, however, as to what particular form of graphite gives the best results does not seem to be definitely settled. If we may be permitted to speak as one having authority and as one having

had an experience of over fifty years in treating different forms of graphite for lubricating purposes, we would say that all forms of graphite have lubricating value, but that for the very best results there is no form of graphite equal to the Ticonderoga graphite which comes from the mines in the form of very thin and very tough, smooth flakes. For heavy and loose bearings the large flake may be used and probably for that work the large flake is superior to a finer flake, but the same flake may be prepared in several degrees of fineness, running from the coarse flake to a fine powder, the powder showing under the microscope in flake formation.

Some one has said that all whiskey is good but some better than others. This is true of graphite for the curves of trolley tracks subjected to mud and dust. Only the cheap common forms of graphite are used, mixed with grease for lubricating the curves. On shipways in launchings the heavy coarse flake is used, and the greater the degree of purity the smoother will the surfaces be, although the higher priced graphite need not be used for such work. On the timbers which house removers use, mixed with soap or sprinkled on the soap which is applied to the timbers to insure easy gliding of the buildings, Dixon's coarse flake graphite has been used with wonderful results in the saving of power and in the prevention of vibration, and yet for such work even Dixon's Powdered Stove Polish has been used with very good results. For high grade machinery bearings only the very purest flake graphite should be prepared, and for such work the finely ground flake graphite which is the basis of all Dixon's Automobile and Machine Greases, is the ideal material.

A BIG PROBLEM

A very big problem of the present day, and one which executives realize is one of the hardest problems of their business, is the inefficiency of employes. This statement may seem at first glance to be radical and without foundation in fact, but careful thinkers and those with foresight and wisdom, declare that it is a fact from which we cannot escape.

The chief asset of business consists not in the stock on hand, or in money, in bank or book accounts, plant equipment, or even credit, but in men, in the personnel of the organization.

It is very hard and even almost impossible, to obtain the ready-made efficiency man. Every firm must make its own efficient men. When a firm has at its head executives who understand the business thoroughly and who are able to make their men efficient, then it will be found that such men will fit in more smoothly than men who are hired as self-made men.

Employes today, in order to be efficient, must know themselves, must know human nature, must know their job, must have a thorough knowledge of the goods they handle, and know how to apply all of the knowledge with which they are equipped.

Managers and executives of a business, no matter what it may be, in order to make employes efficient, must themselves know how to accomplish that, and to have that knowledge they must make a very careful study of their own business, and of all of its ramifications; must have experience and knowledge of that business as it has been in the past, and must have foresight that they may properly cast for the future—otherwise they will not be able to teach their employes.

A QUESTION

With apologies to *The Ambassador*, the house organ of the Niagara Paper Mills, from whom we get the idea, we present, as our theatrical friends would say, the following:

"Are all lead pencil manufacturers liars?" asked a big buyer of pencils whom I met a few days ago.

"I don't think so," I replied. "Why do you ask?"

"Well, I have had a good deal of experience with pencil salesmen," he said. "I've made, among them, a good many strong personal friends. But even those I most respect hand it to me occasionally. Why is it?"

"It isn't," I said. "You only think it is."

"In my judgment, the average buyer of lead pencils is the hardest man in the world to satisfy."

"In the first place, as a rule he knows almost nothing about the manufacture of lead pencils. He knows little about its difficulties, and cares less."

"If he really knew, I believe he would be dazed with the wonder that he ever gets the quality of pencils that he does, or has an order filled as free as it is of delay and mistakes."

Take, for instance, the matter of indelible pencils. During the humid, sultry, hot dog-days, you pick up your "Eterno" indelible pencil or even the "Endurance" that has been lying on your desk exposed to the draft of the window, and to your astonishment you may notice that the well sharpened point has drooped decidedly from the perpendicular. You start to mark with it and it bends and drops off. The next time I come in you give me Hail Columbia, even if you did not in the meantime write a letter to the house about the rotten leads in the indelible pencils. If you knew you would know that every pencil manufacturer has more than his share of trouble in making indelible leads. All of the leads put in black lead pencils, or more properly speaking, all graphite leads are fired or baked at high temperatures and are impervious to moisture, while indelible pencils cannot be baked because of the nature of the material, and the aniline leads are very susceptible at all times to moisture. In other words, if you knew, you would know that it is impossible to make an aniline lead pencil that will stand up to the test of a black lead pencil. The aniline pencil is made for a certain purpose, and that purpose would be defeated if the leads were made in any other way than they are.

Sometimes you get after me because the leads of the pencils are not always absolutely in the center of the wood. You probably would never have discovered this if you had continued to use the good old fashioned jack-knife, but by using the lead pencil sharpener which always centers the lead, you have made the discovery. You think that I am the only salesman that ever gives you lead pencils with the leads not in the centre, but as a matter of fact, leads out of the true center are found in all pencils no matter what the price nor by whom made. The reason is very plain, but I cannot take time to tell you now. There is also a very excellent reason why pencils are sometimes found slightly warped, and if you ever come to the factory I will show you the reason why all these things happen.

Then again, you sometimes give me a ribbon or piece of cloth and ask me to have your pencils made up in that color, and I say all right, and send it in to the factory together with your order. Then I leave the town, and the house writes you that they can't match the color, but you have your heart set

on that color, and I being out of town, the factory gets a letter from you in which you say I promised you that color, and you probably think me a liar or ignorant of my business, and in truth I did not know until I got a letter from the office that sometimes you can't put the same color on wood that you can put on a piece of silk or wool.

But don't let us extend this conversation, Mr. Buyer, because, as I have said before, "it isn't, you only think it is," and you sometimes believe that I have made a positive promise when I have only said, "*I will try.*"

WORTH \$5.00 A POUND TO THEM

There are many thousands of engineers who not only keep within reach of a can of Dixon's Flake Graphite, but rely upon its contents to stop overheated bearings. And yet many of these engineers do not use Dixon's Flake Graphite regularly.

The result is too often a constant and insidious wear on bearing surfaces, which is not unlike the man who ever so often permits his mode of living to bring about a "run down" condition. Dixon's Flake Graphite and the doctor are called upon at the last moment to stop something which a little right practice could have obviated.

These thoughts are inspired by the following account of a story told to a Dixon representative of our Philadelphia branch by a very good graphite customer in Richmond, Va.

"One Saturday morning I received a telephone call from the owner of a large wood-working plant about four miles out of town. He requested me to send down at once five pounds of Dixon's Flake Graphite, by package express. I told him that I could not afford to send this down by package express as the delivery charges would be about half the cost of the graphite. The mill owner said, 'Send it down at my expense, I must have it.' I sent him the graphite.

"A day or so later the above mentioned mill owner stopped in my store and brought up the matter of this graphite, which he explained as follows:

"The bearings on my largest fan began to run hot on Saturday morning, and I tried every means to cool it off, using plenty of oil and grease, and finally turning a stream of water over it, but without avail. I then remembered Dixon's Graphite and telephoned the order in to you with the result that within a short time after receiving the graphite my bearings were just as cool as could be desired and running perfectly. Had I not used the graphite it would have necessitated my closing down the mill and the possible replacing of the bearing. Dixon's Graphite, under conditions mentioned above, would have been worth \$5.00 a pound to me."

We are reminded from the above story that the customer mentioned is not the only one who has found Dixon's Lubricants worth \$5.00 a pound. Teddy Tetzlaff, the noted automobile racing driver, declared that he "would rather pay \$5.00 per pound for Dixon's Graphite Automobile Lubricants than use any other as a gift."

"ADVERTISING is a peddler who brings the wares of the world into the house each day and tells you how cheap and good they are. But it is more desirable than peddlers, because when you are tired of a peddler you can't fold him up and put him on the pantry shelves."



TWO OLD TIME SALESMEN

Among the many Dixon men who attended the Stationer's Convention at Springfield, Mass., none was more interested in the proceedings and in fact none took a more active part in them than Mr. A. K. Ingraham.

Mr. Ingraham is connected with our Boston Office and both in point of age and length of service Mr. Ingraham is the oldest salesman on the Dixon staff, including of course all of our branches. Mr. Ingraham is hale and hearty in his seventy-sixth year and occupies a unique position in being one of the oldest salesmen in the country.

The interesting anecdotes that Mr. Ingraham relates of stage coach days and wayside inns cause the present generation of salesmen to appreciate the many conveniences now offered for conducting a successful campaign.

In the photograph reproduced above many of our readers will recognize the standing figure as that of Mr. Ingraham. This photograph, which was taken at the Springfield Convention, is the very latest likeness of Mr. Ingraham.

At the age of thirty-two, in the year 1870, Mr. Ingraham entered the Dixon employ, and in that year he made his first trip from New York to Bangor, Maine. Those were the old stage coach days, a striking contrast to hotels and train service of the present time.

It is interesting to hear Mr. Ingraham relate the many incidents of that first and subsequent trips of his early career.

In the later years he has covered the West and the South as well as Canadian Territory. Mr. Ingraham's experiences during the many years he has been on the road would make entertaining reading for traveling men of the present day.

A memorable event in Mr. Ingraham's early career was the occasion when he was on duty as a special attendant and bodyguard to President Lincoln when the latter visited Bridgeport after his nomination, making a speaking tour in the East. Even at that time party prejudice ran high and fear of bodily harm being done Mr. Lincoln was apparent.

At that time New England was dependent almost entirely on the southern trade, and public feeling ran high between the loyal and war democrats.

In those days Mr. Ingraham was manager and supervisor of the American Telegraph system. In later years there was hardly a stationer of importance in the country who has not had the pleasure of seeing the genial salesman who is now with the Boston office of the Dixon Company.

Seated beside Mr. Ingraham is "Uncle George" Olney of Kansas City. "Uncle George" has been on the road fifty-eight years and is still going strong. Mr. Ingraham has been doing business for fifty-two years and continues to gather in the orders for the Dixon Company in a manner to make the younger salesmen open their eyes.

"Uncle George" is seventy-eight years old and Mr. Ingraham is two years his junior. Though bordering close on the four-score mark there was not a livelier delegate at the convention than Mr. Olney, as testified by his active part in a minstrel show. They couldn't lose him for a minute and everywhere he went the atmosphere was permeated with jollity and optimism.

Mr. Ingraham is fully as active as Mr. Olney but is of a much more retiring disposition. Mr. Ingraham will celebrate his fifty-fifth wedding anniversary this fall.

Both men have traveled in about every style of conveyance that was ever invented. In stage coach, in buggy, horseback and on all types of trains from the old antique four-wheel coach to the present-day steel cars equipped with every modern convenience. Both men have an inexhaustible supply of interesting personal incidents, dating back many years.

The years of service of both men combined amount to 110 years, which is a remarkable record. And when the two line up at the Philadelphia convention next year they will be welcomed more warmly than ever—if such a thing is possible. The cut shows "Uncle George" seated and Mr. Ingraham standing.

SHARPENING A PENCIL

Chance for Scientific Methods Even in so Simple a Thing

An expert manual training man talked with the writer about so simple a thing as sharpening a lead pencil.

In the first place, he says, the knife should not be oversharp, but should be a little dull, as if too sharp it will cut quickly through the wood and cut away the lead.

Then again, he says, it is best to hold the pencil in the left hand, with the end to be sharpened pointing away from you, and to cut away with a pushing cut, rather than toward you, with a drawing cut, as then the point of the pencil is rested against the side of the thumb, and is sharpened by a draw cut stroke of the knife blade.—*Scientific American*.

TWO OF A KIND

"May we have a reply, please, to our letter of the 8th inst.? We made you a proposition that ought to interest you."

As we are always prompt in making replies to letters, and especially where they contain interesting propositions, we hasten to look up the matter and not finding anything on file, we write an apologetic letter regretting the apparent neglect and add that we cannot find any letter from them whatsoever. A few days later we get a duplicate of that letter of the 8th and lo! and behold! it is a regular circular letter concerning advertising, and a letter that after reading we consider should be carefully deposited in the waste-basket and not crowd our file. This disposition of the letter was not because we felt any offense, but simply because it was a circular letter and we were not interested and so let it disappear.

Then we get a letter written by another party with a somewhat indignant tone and evincing considerable hurt in that we have not answered their letter, and we are asked, "Why this courtesy?" Again we are penitent and again we dictate a letter and ask that we may please receive a copy of *their* letter. The reply that we received is an out-and-out circular letter relative to insurance, pumps or something else.

This is to serve notice that we are not going to be penitent any more—unless just cause is shown.

If there should possibly be any neglect on our part to answer a straight out-and-out business letter, we shall be very glad if we are reminded of same and a copy of the original letter is enclosed "not for publication, but as an evidence of good faith."

"PLUMBISM"**Doctor and the India Rubber Pills**

The following amusing letter is contained in the current issue of the *Lancet*:

A man who had been sitting on the damp grass for some hours writing with a lead pencil and frequently sucking the point thereof while waiting for inspiration, eventually felt a sharp pain in his loins. He limped to a local quack.

After questioning him as to the onset of the attack, the quack simply said "plumbism." The man received some yellow pills, paid the fee, and went away. He was a studious person, and searched the encyclopaedia for the meaning of "plumbism" and what lead pencils were made of. The next day he returned to the quack and said: "You told me I had 'plumbism,' which is lead poisoning, and I now find there is no lead in lead pencils, only graphite or plumbago."

"Oh," replied the quack airily, "did I say plumbism is the cause of your lumbism? I meant to have said plumbago is the cause of your lumbago."

"Oh," said the man, "but anyhow, your pills are only bread."

"Of course, of course," replied the quack; "don't you know that bread is the oldest and finest thing to remove pencil marks with? You didn't want me to give you india rubber pills, did you?"

For the above we are indebted to our London representatives, the "Graphite Products, Ltd."

DIXON's graphite publications sent free upon request.

GASOLINE AND KEROSENE

Dr. Eugene Swayne in *Resorts and Yachting* for October, 1913, calls attention to the gasoline shortage problem. After calling attention to statistics that show the number of gasoline driven boats used for pleasure, automobiles, motorcycles, etc., as well as the ever increasing number of gasoline engines in use on the farms, in factories, etc., he figures out that when they use a pint of gasoline per horsepower per hour, they generate 35,000,000 horsepower and will consume five hundred thousand gallons of gasoline. The oil corporations estimate that one billion five hundred million gallons of gasoline are distilled annually in the United States.

Then the doctor indulges in some more arithmetic and goes a step further. Suppose that every gasoline engine was to be run at its rated horsepower every day. Our annual supply of gasoline would only permit them to run one hour per day. In other words, we only have available supply enough to operate about five per cent of all gasoline engines now sold. (These statistics are from the Bureau of Mines.)

If you stop to study the above amazing figures you can readily see what is going to happen to our gasoline supply in the near future. It is simply a case of supply and demand. We are continually hearing about boats being run on kerosene in all parts of the country, and the kerosene carbureter is now being used, although in a very small way, on automobiles.

By drawing on statistics again, we find that the annual output of kerosene is three billion gallons and the supply is practically unlimited in all parts of the world. The kerosene attachment has come to stay, and undoubtedly there will be improvements made, and the doctor believes that we will see at least one-third of the yachts fitted for kerosene in 1914. What the doctor says about yachts may eventually be applied to automobiles—then the question will be practically solved so far as our immediate interest is concerned.

THE KENILWORTH APARTMENTS

Upon the back page of this month's issue of GRAPHITE appears a view of the beautiful new Kenilworth Apartments, one of the largest and most attractive buildings of its kind in Philadelphia. The Kenilworth Apartments face Rittenhouse Square at South Nineteenth Street, which district is to Philadelphia what Riverside Drive and Fifth Avenue is to New York.

This particular view of the Kenilworth Apartments, as will be observed, was taken just before its completion and shows part of the 1,400 tons of structural steel work which is protected from rust and decay by Dixon's Silica-Graphite Paint.

TAKING NO CHANCES

■ A young girl was taking a trip on one of the Great Lakes in a small steamer. The lake was quite rough and many were seasick. The girl sat in the bow and was unusually quiet for her, so her father thought. He watched her a few moments in silence, then asked:

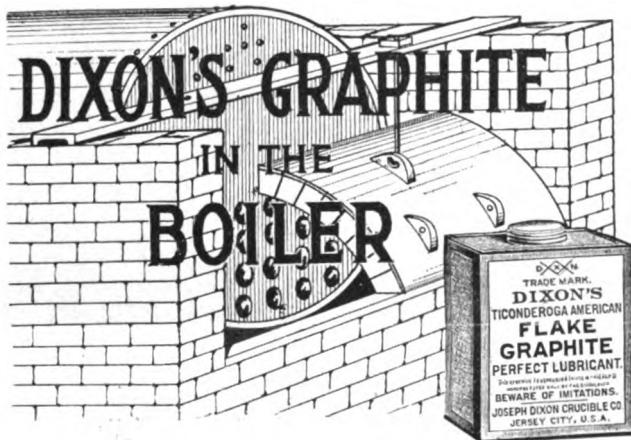
"Are you feeling sick, Marion?"

"Well, not exactly sick, but I should hate to yawn," she replied.—*Sunday Magazine*.

SOME BOILER GRAPHITE HISTORY

It is claimed by some of our competitors that they are the originators of the idea of using graphite in steam boilers for the purpose of removing scale. Of course, such claims are unfounded in fact, for this particular use of graphite and every other one we know of has been promulgated first by the Dixon Company. We have letters upon file at our office telling of the use of graphite in boilers twenty-five years ago. All of our products have been imitated, but as might be expected, there is a vast difference between the original and the imitation as far as quality is concerned.

Our readers may be interested in the advertisement reproduced below, which was published in GRAPHITE, May, 1907. Earlier reference to this subject was also published in the August, 1904, issue of GRAPHITE and that was several years before the so-called "Original Boiler Graphite" had even been thought of.



If there are any who hesitate to use Dixon's Flake Graphite because they fear its effects on the boiler, let them put aside their doubts.

Far from being a detriment, it is a positive advantage. Graphite makes the scale more crumbly, and allows of its easy removal.

A correspondent writes:

"I have found that flake graphite is the best thing to take scale off a boiler. I placed the graphite in tank pump which lubricates tank pump valves and crosshead pump valves and cut scale from boiler."

We want to start you on the use of Dixon's Flake Graphite, which is one of the best money and labor savers we know of.

So write for free test sample No. 190-T.

**Joseph Dixon Crucible Co.,
Jersey City, N. J.**

THE BAFFLED SUICIDE

Water Too Cold for Suicide—Man Jumps into East River and Then Calls for Help.—*Headline.*

The thought came to me yesterday
That life was crool and hard.

"I'll hang myself!" I cried, and built
A gibbet in the yard.

But as I tied and noosed the rope
An Inner Voice exclaimed:

"Have you reflected that your neck
Is likely to be lamed?"

"Too true," I sobbed, "they are too true,
Them words you've went and spoke,
And while I'd love to hang myself,
How I would hate to choke!"

I grasped a pistol in my hand
And raised it toward my head,
But as my trigger finger crooked
My Conscience up and said:

"One moment, please! Think well before
You pull a stunt like that!
Have you reflected that this deed
Will spoil your Sunday hat?"

"Them words is true," I wailed. "Alas!
Them bitter words is so;
I'd kind o' like to shoot, but that
Would ruin my chapeau!"

I sought the sea, but Conscience cried:
"Be careful what you do!"

I've seldom seen a chap that was
So carelesslike as you—

A callous government has failed
To warm the briny tide;
Why can't you wait until next June
For this here suicide?"

"Well then," I moaned, "I'll wait till June—
I'd hate to get a cramp—
But I'm afraid that even then
The water will be damp!"

I never had no luck at all—
The world is full of woe!—
Just think of all the months to wait,
The weary months and slow!
I sit and sigh and weep and moan
Beneath the mournful moon,
For I've a premonition that
I'll fail again next June.

Some day crool Fate will drive too hard!
By heck, I'll rise in rage
And shake my fist at Fate, and row
To perish of old age!

—“THE SUN DIAL,” New York Sun.

WE WONDER if it is one on the efficiency engineers, when a concern in New York "goes broke" trying to cut expense for others? This happened a short time ago to a concern that ended up with liabilities of \$75,000 and assets of \$30,000.



The accompanying illustrations show trolley and electric light poles of the Bangor Railway and Electric Company, which are protected with Dixon's Silica-Graphite Paint.

These tall wood poles, products of the Northern Maine wilderness, are not only well protected, but present an attractive appearance with a coat of Dixon's Olive Green. It is a color that harmonizes well with the surroundings either in town or country. The dark, rich shade not only gives a suggestion of substantiability, but aids in making attractive one of the most beautiful trolley lines in New England.

Bangor is an up-to-date city, a fact that strongly impresses visitors from Boston and New York after a trip through Maine to the Queen City, and the efficient officials of the Bangor Railway and Electric Company are certainly up-to-date in selecting such an exceptionally satisfactory protective coating for metal and wood work.

The Bangor Street Railway was one of the first electric roads constructed in the United States and has always remained one of the first in efficiency of service.

It is an interesting fact that one of the poles shown in the illustrations was in the midst of Bangor's great conflagration which destroyed a large section of the city. Despite the intense heat, the paint remains in good condition.

TAKES CAPITAL FOR THIS

We read in a daily paper that detectives are searching for a woman with a new "flim-flam" game and incidentally a \$350 fur coat and the \$650 change for a \$1,000 bill. She offered a good \$1,000 bill in a department store; it was officially vised at a bank. Milady was angry at this humiliation, but was finally mollified, took the coat, shifted the good bill for a spurious one and departed.

ASKS THAT TREATING BE STOPPED

According to the *New York Times*, one of the local jobbing houses received a letter concerning "graft" for buyers. It came from a well known retail dry goods store in the Middle West, and said:

"We have read with interest in the New York papers reports of a recent case of giving graft to a buyer in that city.

We would ask, apropos of this matter, that you notify your salesmen and department heads that we do not wish gratuities of any kind to be extended to our buyers when they are in New York. We give them expense accounts liberal enough to cover necessary expenses and a fair amount of amusement. Even in cases where business acquaintance has grown into personal friendship, we ask that no invitations or presents be given. We believe you will appreciate the justice of this request and act accordingly."

In trade opinion, the firm taking this stand is to be commended. It was said that letters of this sort from other houses would soon minimize the evil.

THE STUFF

The test of a man is the fight he makes,
The grit that he daily shows;
The way he stands on his feet and takes
Fate's numerous bumps and blows.
A coward can smile when there's naught to fear.
When nothing his progress bars,
But it takes a man to stand up and cheer
While some other fellow stars.

It isn't the victory, after all,
But the fight that a brother makes;
The man, who, driven against the wall,
Still stands up erect and takes
The blows of fate with his head held high,
Bleeding and bruised and pale,
Is the man who'll win in the by and by,
For he isn't afraid to fail.

It's the bumps you get and the jolts you get
And the shocks that your courage stands
The hours of sorrow and vain regret,
The prize that escapes your hands
That test your mettle and prove your worth;
It isn't the blows you deal,
But the blows you take on the good old earth
That show if your stuff is real.—*Exchange*.

WHAT DO YOU THINK OF THIS?

The expenses of the Post Office Department for the year ending June 30, 1912, were over \$248,500,000.

Second class matter furnished over two-thirds of the paid tonnage. Its publishers contributed only about \$9,000,000 toward this expense. The government lost over \$66,000,000 in the distribution of their product.

The department received over \$18,750,000 for postal cards during the same year, the weight of which was about 11,000,000 pounds, which means that 11,000,000 pounds of postal cards paid just about twice as much revenue as 939,900,000 pounds of second class matter.

Users of letter postage pay a tax of one cent every time they use a two-cent stamp.

So says the National One-Cent Letter Postage Association, Cleveland, Ohio.

DIXON'S graphite publications sent free upon request.

FIRST SKYSCRAPER TO BE TORN DOWN

According to the daily papers the Tower Building, located at 50 Broadway, New York, will be torn down.

The name, Tower Building, is today a misnomer, but when erected twenty-four years ago, it was the tallest building in lower New York, and it was the first structure ever put up of the skeleton steel type.

The Tower Building is eleven stories high and the Broadway frontage only a little over twenty-one feet. The demolition of this building is in itself a remarkable illustration of the wonderful advance in structural methods within a quarter of a century. Bradford Lee Gilbert was the architect of the Tower Building, whose height was accentuated by the fact that its Broadway frontage is only a few inches over twenty-one feet. When he filed his plans in 1888 the Building Bureau was taken by surprise. The Board of Examiners of the Building Bureau

discussed the project with apprehension, but after considerable delay the plans were approved. In 1889 the structure was finished, and it was the wonder of the town. A man who had an office in an adjoining building told Mr. Gilbert afterward that he had moved away because he felt that the Tower Building would surely blow over.

In the corridor is a tablet, placed there in 1899 by the Society of Architectural Iron Manufacturers of New York, commemorating its erection as "the earliest example of the skeleton construction in which the entire weight of the walls and floors is borne and transmitted to the foundation by a framework of metallic posts and beams."

The tablet will be carefully removed, but its future disposition has not been determined. On the tablet are the names of the architect and the Jackson Architectural Iron Works, which supplied the steel and iron.

No Auto Thrives with Grit in its Craw

and bearings. "But," you say, "how can that be when I put in good lubricants?" Oil and grease alone will never prevent this grinding. Friction is the constant filing over each other of little microscopic pins and roughnesses that are found even in the most highly polished bearings. Oil and grease merely smear these over. Heat thins the oil or grease and it runs in and out of these roughnesses. They are constantly wearing away and breaking off. There is only one way to put a stop to this mischief. Dixon's selected flake graphite as combined in Dixon's Graphite Greases makes a lubricant that fills up every surface irregularity and puts an unctuous, smooth veneer over the entire bearing, so that metal cannot come in contact with metal. The more it is rubbed, the more brilliant finish and polish it takes on. There is only one form of flake graphite that will do this trick, and this is produced only by the Joseph Dixon Crucible Company. A car thoroughly lubricated with Dixon's Graphite Automobile Lubricants gives greater satisfaction than any car doped with any other lubricant. Buy a can of **Dixon's Transmission and Differential Grease No. 677**, and put this claim to a test. All dealers and garages who are in business to sell service as well as take your money sell Dixon's Graphite Automobile Lubricants.

Every man when cleaning out the crank case of his engine has seen a black, gritty substance that he has taken for sand or dirt. Friend, that isn't dirt. It's the little particles of steel that imperfect lubrication permits to grind off in the daily whirl of travel. The same thing is going on in the gears

**DIXON'S
GRAPHITE
Automobile
Lubricants**

Made in JERSEY CITY, N. J., by the
JOSEPH DIXON CRUCIBLE CO.
Established in 1827

Metal-to-metal contact in bearings is what eventually sends the finest cars to the scrap heap.

DIXON'S Graphite Automobile Lubricants

are the only automobile greases that absolutely prevent wear in bearings. They cost more than plain grease, but their cost is a trifle compared with repairs.

Ask your dealer

Made in JERSEY CITY, N. J.
by the
Joseph Dixon Crucible Co.
Established in 1827

THE COLORADO & SOUTHERN RAILWAY COMPANY

*Joseph Dixon Crucible Company,
Jersey City, N. J.*

GENTLEMEN:—I can give my unqualified praise to Dixon's Boiler Graphite. It has eliminated my scale trouble entirely. Boiler tubes are now as bright as a gun barrel.

Before using graphite the flues in the boiler in the pump house had to be taken out once a year. When they were taken out the belly of the boiler was nearly half full of scale.

Respectfully yours,

C. W. FELLOWS,

DENVER, COLO., Oct. 13, 1913. Foreman B. & B.

THE STORY is told of a farmer, in from the country for the day, to see Barnum and Bailey's circus. While looking at the various signs advertising the side shows, he ran across one that told of a bull that weighed over 4,000 pounds, the largest ever known. The farmer stood before this sign for many minutes with his hands deep in his pockets and shaking his head as if this was entirely beyond him. Finally his curiosity got the better of him and he walked over to the ticket seller and asked if this bull really existed and upon being told that it was true and that the bull was on exhibition inside, asked the price of admission. When told that the price would be ten cents, the farmer shook his head, remarking that he could not afford it, as it would cost him \$1.90 to see this wonderful animal. The ticket seller then became curious and asked how he figured this, and upon being told by the farmer, that he had his wife and seventeen children just around the corner, he was told that if he would bring them around in front of the tent, stand them in line with himself at the head and his wife next to him and the children arranged according to age, it would cost him nothing, for he would have the bull brought out to see the farmer and his family.

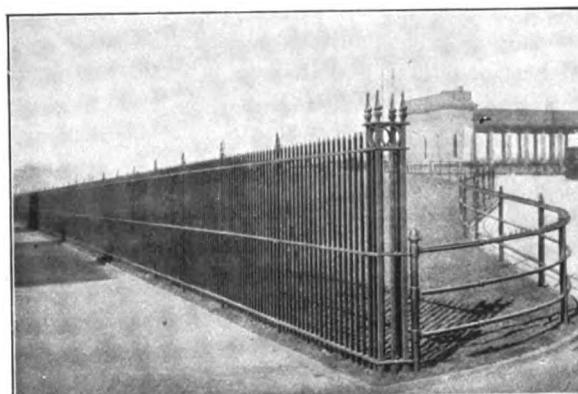
THOUGHT AWAKENERS

The cashier girl in a restaurant is a shrine before which men unload their folly.

Men of a kind are always of one mind.

People who must see everything must expect to see unpleasant things at times.

Life is a problem which we can only solve in the living; hence we cannot rectify mistakes, but we can learn wisdom from them and avoid them in the future.—JOSEPH WADE.



THE ABOVE illustration is of a section of the iron railing and pipe fence in DeWitt Clinton Park, New York City.

Both railing and fence were erected by F. E. Carpenter & Company and painted with Dixon's Silica-Graphite Paint.

For iron fences and railings it has been found by those most concerned that Dixon's Silica-Graphite Paint gives a most unusually economical service. If used at the time of erection, Dixon's Paint successfully resists for a much longer period than any other paint the appearance of rust spots. And for repainting Dixon's Paint is equally efficient.

AS IT APPEARED TO THE BOYS

There are some earnest church people and Sunday school workers in the Dixon office, and also others, so as to make a working average. Our Methodist man tells the following:

"Now, boys," said a Sunday school teacher, "I want each of you to subscribe something toward the mission to the Cariboo. I shall hand the box round, and as each of you contribute you will, I hope, say some appropriate text. Now, Charles, show a good example."

A ruddy-faced urchin stepped forward, dropped his coin and observed:

"It is better to give than to receive."

Then another contributed a copper, saying:

"Waste not, want not."

This was ruled somewhat out of order, but it was fairly capped by a third youngster, who evidently parted with his penny with extreme reluctance, for as he dropped it into the box he murmured:

"A fool and his money are soon parted."

THE National Poultry, Butter and Egg Association estimate that one billion of dollars worth of eggs a year are sold and \$75,000,000 worth are broken in transit. Some bird, the hen, but as things go it is a wonder some people don't lay the broken eggs to her.

FOR FUN

"What is the secret of success?" asked the Sphinx.
 "Push," said the Button.
 "Never be lead," said the Pencil.
 "Take pains," said the Window.
 "Always keep cool," said the Ice.
 "Be up-to-date," said the Calendar.
 "Never lose your head," said the Barrel.
 "Make light of everything," said the Fire.
 "Do a driving business," said the Hammer.
 "Aspire to greater things," said the Nutmeg.
 "Be sharp in all your dealings," said the Knife.
 "Find a good thing and stick to it," said the Glue.
 "Do the work you are suited (sooted) for," said the Chimney.

—*Congregationalist.*

A VERY wise man has said that "short of the multiplication table there is no truth and no fact which must not be proved over again, as if it had never been proved, from time to time." It is because of the recognition of the truth of this saying that our readers find us repeating over and over again what we have been saying for many years relative to lubricating graphite, and it is again for this same reason that not only do we repeat over and over again, but we make use of testimonials from those who have tested and proved our statements.

It is not a difficult matter to suspend graphite in oil. So far as we know, no one holds a patent on the process and no one has attempted to obtain a patent. It is simply a scientific process, so it is stated; Michael Farrady having successfully suspended gold in water nearly a hundred years ago, and a bottle containing the result of that experiment is still said to be in a British museum. In all probability, however, graphite suspended in oil is of no more use commercially than the gold which Farrady succeeded suspending in water. For the best results, in fact for the only results in graphite lubrication, the graphite should settle from the oil or grease and become fixed upon the microscopical irregularities of the bearing surfaces and form, as Dixon's Flake Graphite does, a veneer-like coating on the bearing surfaces.

WORTH THINKING ABOUT

The rarest thing in business is the man who knows.
 The most common thing is the man who does everything wrong because he doesn't know any better!

The three chief elements of salesmanship I believe to be ideas, knowledge of goods and persistence.

—*From the Junior Partner.*

HOW HE GOT HER

A woman was asked why she chose a helpmate so much older than herself. She said she couldn't get out of marrying him. "When he proposed he said, 'Will you marry me?' 'Do you object?' You see no matter whether I said 'yes' or 'no,' he had me."

"Why didn't you keep silent then?" inquired the friend. "I did and he said, 'silence gives consent,' and that ended it."

—*Hearst's.*

DIXON's graphite publication sent free upon request.

EXPERTS IN EFFICIENCY

We will not say that not a day goes by, but we think we can safely say not a week goes by, that we are not offered the services of some "expert in efficiency."

We read the other day, that Mabel said to her friend Ethel that she had not been introduced to Harry more than two minutes when he kissed her. Ethel asked how it happened, to which Mabel replied: "Oh! you know that Harry is an expert in efficiency." Evidently experts in efficiency may safely be classed as progressives, even though they may not belong to the Bull-Moose Party.

CARBON (the big and ordinary brother of graphite), Nature's most versatile element, having six hands or bonds by which it can grasp other elements to itself—in its simplest form a black, odorless solid, absorbing and utilizing therefore light of all wave-lengths, and when heated to incandescence returning all wave-lengths as white light—is the foundation in plasm of all animal and vegetal life.

Nitrogen, the obstinate element, sensible neither to sight nor smell—which remains free in the air, though in the presence of oxygen; and because of its instability in combination, forms the basis of all explosives—unites with carbon in the simplest possible union to form cyanogen (CN), a colorless, pungent, poisonous gas, burning in a pink flame edged with green.

—*Science Conspectus.*

CHEAP EGGS

That Do Not Affect the Cost of Living

The surprising number of replies to the problems we have had in GRAPHITE, shows not only that GRAPHITE gets attention, but that our readers enjoy a little mental exercise.

One gentleman in answering the problem on page 3656 of GRAPHITE for November adds: "Here's another good one that may prove puzzling to some people: If you can buy as many eggs for three cents as eggs cost per dozen, what is the price of eggs?"

"Rather cheap eggs, but then it is only a problem and does not take account of the present high cost of living."

A YOUNG man courted a girl who had three sisters, all of whom closely resembled her. He was asked how he distinguished the sisters in order to be sure he was making love to the right one. He replied that he did not try to. The same reply might be made by the user of Dixon's Lead Pencils. You need not try to always get one of a given name, for any one of the Dixon American Graphite Pencil family is equally good, and in quality one closely resembles the other.

"ADVERTISING makes millionaires and presidents, makes great actors out of fur coats with indifferent filling, supplies widows with husbands, babies with homes and deserts with people. Advertising gets some people into society and others into jail. Advertising supports literature and makes nations boom. The country which advertises waxes exceeding great in immigration problems, while the land which has no press agents crumbles away and is discovered by archæologists in the dim present."

A HINT TO INSURANCE AGENTS

FARMERS MUTUAL INSURANCE CO.

LINCOLN, NEB., April 11, 1913.

*Joseph Dixon Crucible Company,
Jersey City, N. J.*

GENTLEMEN:—I have for some time received GRAPHITE and also acknowledge receipt of a copy of "Lubricating the Motor," for which please accept my thanks. I have learned many valuable points in regard to lubrication from your literature and beg to advise that I have used Dixon's Graphite on both of my cars for about a year with excellent results. I have never put back a bolt, nut, spark plug or other part of my machines without a free application of Dixon's Motor Graphite. I recommend Dixon's Automobile Lubricants to my friends and agents.

Yours very truly,
A. ZABEL, Secy.

MR. MEEK had a new conundrum. "Why am I like a pin?" he asked his better half.

He guessed she would answer: "Because you are so sharp," but she didn't.

"Because if you got lost it wouldn't be worth while wasting time to find you," was her reply.

He doesn't ask conundrums now.—*The Stationery World.*

TWO BOYS, one a Jew and the other Irish, both received a dollar bill for Christmas.

They started out the next day together and little Mike spent some of his dollar in the first store they came to.

Levi, however, simply asked to have his dollar changed into dimes and nickels.

Going to another store, Levi had a clerk to change his money back into a dollar bill.

"What makes you keep changing your money, Levi?" asked Mike.

"Sooner or later some-von is goin' to make a mistake," replied Levi, "un it ain't goin' to be on me!"—*O-B Bulletin.*

THE ADVERTISING MAN of *Hearst's Magazine* has a happy way of weaving anecdotes into his letters soliciting advertising. He tells of a mother who cautioned her little boy that he must not do things on the sly, because God kept his eyes on him and followed him everywhere. The next morning he started down the village street, and turning sharply, noticed his faithful crony, Rover, at his heels. "Aw, go on home!" he said, "Ain't it bad enough to know that God is always following me without you tagging after me, too?"

HOW MANY?

At the Master Car Builders' and Master Mechanics' Convention held at Atlantic City in June, two men met who had been given samples of Dixon's Anglo-Saxon Lead Pencils. One man said to the other, "give me one of your pencils and I will have just as many as you." "No," said the other, "give me one of your pencils and I will have twice as many as you."

How many did each man have?

DIXON'S BOILER GRAPHITE "THE BEST EVER"

Mr. Sam Mayer, manager of the Dixon Chicago Office, sends us the following interesting letter in regard to the use of the Dixon Boiler Graphite by the chief engineer of McNeil, Laufe & McNeil, Chicago, Ill.

"I have used your Flake Boiler Graphite for the past five years and find my boiler in better condition since using same than ever before. Also notice my engine running far more smoothly, due to lubrication received from the small percentage of graphite carried over with the steam. I recommend the use of your Flake Boiler Graphite to all engineers and believe they will feel the same about it as I do, that is to say, "the best ever."

THE FOLLOWING is brought to our notice:

"While at Atlantic City at the Street Railway and Interurban Convention, I was introduced to a very prominent Englishman, who is a mechanical engineer from Chili, S. A. This gentleman told me how much he was interested in Dixon's Flake Graphite for boiler use. After reading the article he said he immediately sent one of his employes to their store-room where they had some cans of Dixon's Flake Graphite and had the graphite tried at once. He stated that it saved them several hundreds of dollars."

"KEROSENE Explodes In Drug Store" is a heading of an article in a local paper. It then goes on to tell that "the fire started from an explosion of alcohol from a gas stove in the rear of the store." Although the kerosene and the alcohol and the gas stove are somehow held responsible, the reader is left in a state of uncertainty.

Occasionally we read of the explosion of a steam engine, which often reminds us that the average newspaper reporter is better in reporting a baseball game than he is in reporting mechanical or chemical matters.

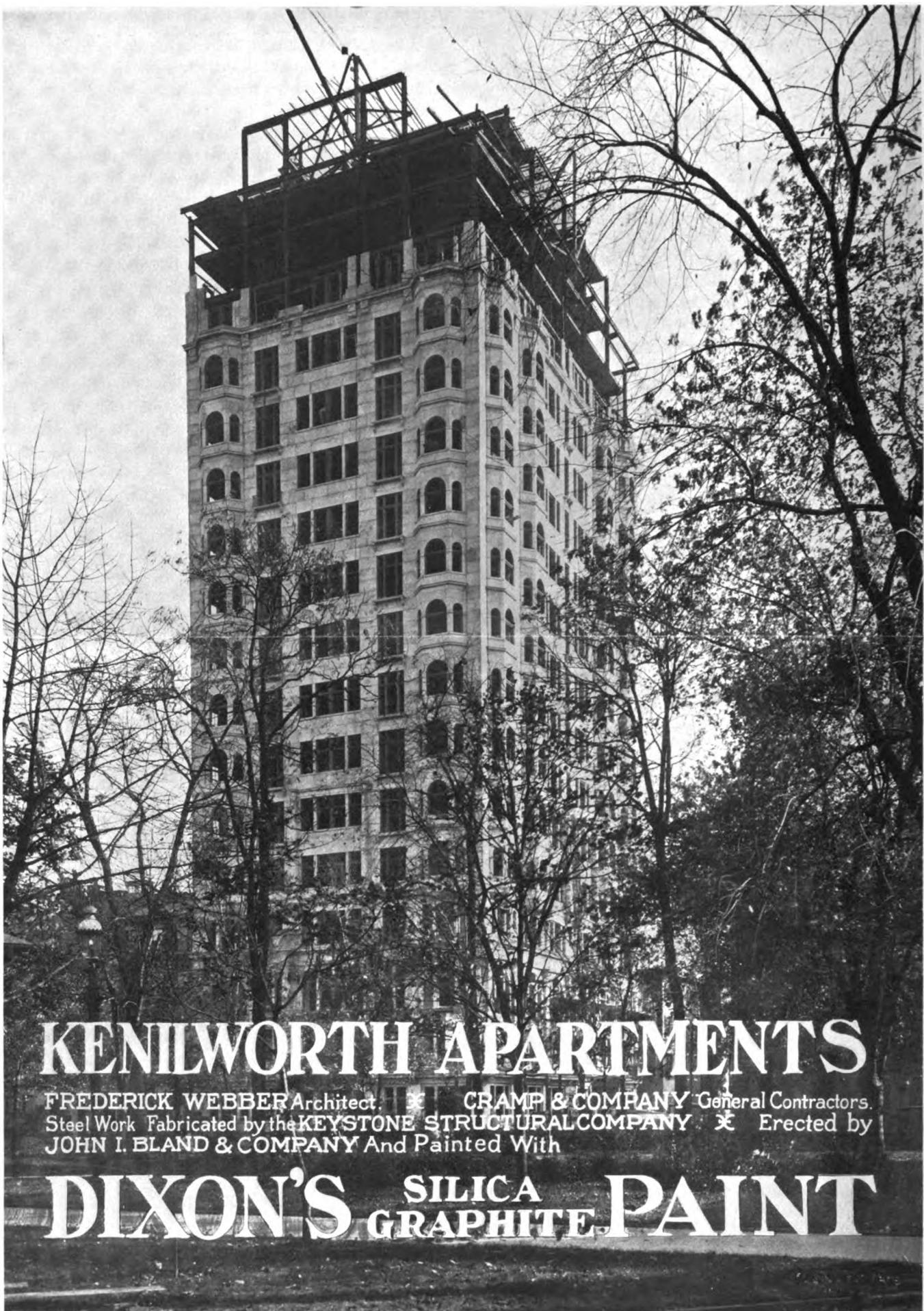
THE man who complains loudly of being underpaid is quite apt to be the fellow that is overpaid. A good business house will not underpay a good business man. Men of this calibre are too scarce, and business men cannot afford to lose them. If you are not getting what you think you are worth, think along another line for a week or two and then watch results.

THEY tell us that Spanish is an easy language to learn. It may be, but if you want to say, "You must put on your waterproof, as an umbrella would be of no use to you," this is the way you put it literally: "Must you to put yourself your impermeable since an umbrella not to you would serve for nothing." But if you want to say, "Give me a glass of beer," why, thank heaven, that is the same as in English.

GRAPHITE GREASE?

"I don't believe in kickin'—
It ain't apt to bring one peace;
But the wheel that squeaks the loudest
Is the one what gets the grease."

—*Cal Stewart's Philosophy.*



KENILWORTH APARTMENTS

FREDERICK WEBBER Architect. CRAMP & COMPANY General Contractors.
Steel Work Fabricated by the KEYSTONE STRUCTURAL COMPANY * Erected by
JOHN I. BLAND & COMPANY And Painted With

DIXON'S SILICA GRAPHITE PAINT

GRAPHITE



VOL. XVI.

JANUARY, 1914.

No. 1.

Issued in the interest of Dixon's Graphite Productions, and for the purpose of establishing a better understanding in regard to the different forms of Graphite and their respective uses.

THE FUTURE FOR THE AMERICAN MANUFACTURER

The trained business man everywhere fully understands today the value of organization. It is well known that the keynote of modern business throughout the world, but particularly in the United States, is perfect organization. The day must come when the American manufacturer will be obliged to look very largely to foreign countries for the output of his factory. There is no good reason why the American manufacturer should remain quiet while England and Germany are establishing firm business relations in Latin-America.

Legislation is needed for better facilities for doing business in Latin-American countries. No single house engaged in one kind of business can

wield very much influence when it comes to raising its voice in Washington, when desirable and needed legislation may be required. Individual application for redress is more or less frowned upon, for obvious reasons. When, however, through united effort, the entire body of manufacturers of this country raise their voices through an organization like the American Manufacturers Export Association, they are bound always to secure a respectful hearing. There can be absolutely no doubt whatsoever concerning this point. The National Legislature is always glad to receive suggestions which are the result of careful thought and experience. The successful execution of modern business is quite as much a profession as that of law making, and it is unreasonable to assume that the men constituting the National Legislature can always be thoroughly abreast of and can thoroughly understand, without due explanation, the needs of those American manufacturers who are making a special effort to introduce their wares in foreign lands. In this particular direction the American Manufacturers Export Association can wield an almost incalculable influence.

The Association has already a large membership, but it should be much larger, and we respectfully suggest that American manufacturers who are not already members of this organization, should seek to learn more of its work by addressing its secretary, Edward V. Douglass, 66 Broadway, New York.

DIXON's graphite publications sent free upon request.

A NEW YEAR'S greeting comes but once a year, so we shall not waste our wishes upon material prosperity; but as something more precious we do hope that each day of the New Year may swell the capital and surplus of your happiness so that it overflows and spreads to all of those with whom you come in contact.



MERRIMAC RIVER BRIDGE,
HAVERHILL, MASS.

MERRIMAC RIVER BRIDGE, HAVERHILL, MASS.

The accompanying illustration gives an interesting view of the large steel bridge of the Boston and Maine Railroad crossing the Merrimac River at Haverhill, Mass.

All steel work contained in this structure is well protected with a coating of Dixon's Silica-Graphite Paint. Railroad bridges in New England are subject to unusually severe conditions including the severe storms of winter and hot sun and wind driven dust of summer. The Merrimac River Bridge is one of many on which Dixon's Silica-Graphite Paint is rendering excellent service.

ESTABLISHED 1827



INCORPORATED 1868



JOSEPH DIXON CRUCIBLE CO.

JERSEY CITY, N. J., U. S. A.

**Miners, Importers and Manufacturers of Graphite,
Plumbago, Black Lead.**

OFFICERS:

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NEW YORK SALESROOM, 68 Reade Street.

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BOSTON OFFICE, 347 John Hancock Building.

PITTSBURGH OFFICE, Wabash Terminal Building.

ST. LOUIS OFFICE, 501 Victoria Building.

BALTIMORE OFFICE, 1005 Union Trust Building.

BUFFALO OFFICE, 72 Erie County Savings Bank Building.

ATLANTA OFFICE, Fourth National Bank Building.

EUROPEAN AGENTS,

Graphite Products, Ltd., 218-220 Queen's Road, Battersea, London.

SOUTH AMERICAN AGENT,

Alfredo J. Eichler, 666 Calle Cangallo, Buenos Aires, Argentine.

CUBAN AGENTS,

For all Products Except Dixon's American Graphite Pencils

Croft & Prentiss, Room 424 Lonja Building, Havana.

For Dixon's American Graphite Pencils.

Harvey & Harvey, Empedrado 30, Havana.

"LET THE BUYER LOOK OUT"

If the late vice president of the Joseph Dixon Crucible Company, Mr. John A. Walker, could have lived, he would today be more than pleased to know that his old time contention that the business world was growing better and better, and its members more upright in their dealings one with the other than ever, has been fully proven.

Mr. Walker was ever an optimist in business integrity. He practiced what he preached and he frequently made the state-

GRAPHITE

January, 1914.

ment that if the Dixon business was his own he would hew even closer to the line than he did. In all the letters that he wrote, and in all the circulars that he composed, he was careful always to state only that which he believed to be absolutely true.

Therefore, it would please him greatly if he could know the trend of present business practice, the disposition to make fair prices and not to cut them, to say nothing in an advertisement that is not borne out in fact. He would be quick to endorse the "new ideals of commerce" by Mr. Redfield, the Secretary of Commerce, who is himself a practical business man. Mr. Redfield tells us:

"There are thoughts abroad in the land that have not always been here. The time in which the getting of profits was the supreme ideal has been succeeded by a time in which the giving of service is thought to be the true ideal. Few men will deny the ideals of one time become the practice of the next, and that our whole history, whether on the commercial, the material, or the political side, has been the gradual working out into fact of the ideals of the days before."

"There was an old commercial ideal wrought into law, which law still has a measure of respect from its antiquity, though hardly from its respectability. This ideal was centered in the old Latin law phrase, *Caveat emptor*, which being interpreted is 'Let the buyer look out.' Look at this commercial ideal a little and see how disreputable it has become. There is coming into being a new law of fair trade, which begins rather plainly to say that the seller has grave responsibilities, and that it is his business to watch out lest he deceive the buyer. There is a growing conception of honor in such matters; men will carefully buy of houses the names of which they think are trustworthy guarantees of quality."

"Men of broad vision, who grasp the truth, put their conscience into their goods, knowing it pays. Men of narrow vision will try to persuade over the bargain counter that they are serving the consumer by giving him a dollar's worth for fifty cents."

ET TU, BRUTE

In GRAPHITE for August, 1913, we illustrated the Lake View Building, Chicago, Ill., with a short write-up and inadvertently said, "The Lake View Building is located on one of the busiest thoroughfares of the Windy City, and as its name implies, commands a view of Lake Superior."

Of course, the error was quickly discovered and several writers poked fun at us and reminded us that it was Lake Michigan and not Lake Superior that is visible from any building in Chicago.

In our own defense we stuck to it that a real Simon pure Chicago man, when on top of the Lake View Building, could see not only Lake Michigan, but Lake Superior and portions of the Rockies. We did not suppose that we would ever have any criticism from any one in Chicago, but now it comes straight from Chicago with the remark, "Some View! See Rand-McNally's book on Geography."

THE HAND of destiny shapes our ends, but in sharpening pencils there is nothing that helps so much as the straight grained Florida cedar in Dixon's American Graphite Pencils.

THE NEED OF IMPROVEMENT IN OUR FOREIGN BANKING SERVICE

In a speech at the Fourth Annual Convention of the American Manufacturers Export Association, Mr. David N. G. Penny, of the Irving National Bank of New York, said:

"There is not a single American bank with branches south of Panama, although the English, French, German, Italian, Belgian and, lately, the Swiss, have started a bank with a capital of four million dollars, half of which is subscribed, and are about to open an office at Buenos Aires. Only the English South American branches have, so far, established offices in our city or in America. The other banks are represented here only by correspondents, and are not organized for the purpose of financing the American trade, but to foster the trade of their respective countries.

"The reason why our American banks do not go in for the South American business, is because most of the foreign department managers are restricted in the amount of money which they may employ in the conduct of their business, and in financing South American exports it is necessary to count upon the lock-up of funds for about five months, at least, because practically all drafts on South America are drawn on ninety days' sight—payable in ninety days, sight rate of exchange—but the return remittances may be discounted immediately in London, or Paris, as the case may be.

"The real need of foreign banks in which American capital is invested, is in order that the American manufacturers may obtain closer information as to the standing of firms, and as to what is going on—what new improvements are being thought of—which information at present goes to the European countries at first-hand, unless we get the information from our American Consuls or American manufacturing and exporting houses who have their own establishments in the foreign cities."

THE BEST TIME TO BE ALIVE

Every little while there comes to the surface an enthusiast with a dream like that which lured the Spaniards when America was young—the dream of perpetual youth. The latest was a Westerner who promised himself, by reason of a certain regime of diet and exercise, a life span of at least 200 years, with a sneaking hope of eternity.

Far be it from us to belittle the importance of living carefully and long. But why put so much emphasis on youth, as if only the morning of life were worth living?

Don't you suppose that white-bearded grandpa, snoozing on the porch in the shade, or watching the infants play, has as much fun out of life as the giddiest lad or maiden?

To be sure, it is a different kind, which happily is one of Nature's ways of insuring interesting variety. But, his rough work done, as the sun slowly goes to meet the far horizon, he lives anew in the young life about him and, out of passion's ashes, builds a ripe philosophy.

Every time in life is a good time to be alive, for always you can feel, see and learn. We are not at all convinced that ripe old age isn't the best estate of all; for then the heart is mellowed, the mind matured and the spirit seasoned, while in the treasury of memory are stored innumerable joys, the better for the enchantment which distance lends.

AUTO COMFORT FOR WINTER

Some of the Things Not to Do if You Eschew "Dead" Storage

Undoubtedly the heir to the throne of success is the man who owns and uses a good automobile, said Thomas J. Fay, past president of the Society of Automobile Engineers, the other day.

At this time of the year, he said, when the more timid of the car owners are fretting about the possible mischief that Jack Frost may be up to; when some owners, like Nature's small fry, would undergo a monotonous hibernation—placing their automobiles in dead storage—it but remains for the wise ones to have a care:

Don't depend upon water in the radiator—use half and half, water and glycerine, or like proportions of denatured alcohol.

Don't purchase inferior "motor spirits" (gasoline); the heavier products are non-volatile in cold weather.

Don't use viscous lubricating oil; get a standard brand of winter-body automobile lubricating medium, in sealed cans.

Don't run on partly deflated tires; they will crack in the cold.

Don't let dirt accumulate at the joints at any point; it will form a hard crust and cut like a knife-edge.

Don't neglect the springs; they make a noise, crying for graphite grease between the plates.

Don't fold the top down while it is wet; the fabric will freeze and crack.

Don't let mud fresh from the road keep an appointment with depreciation on the "finish" of the body; it will elope with the color.

Don't keep up a high speed on frozen and rough roads; battle-scarred tires will be the product.

Don't leave the lap-robés at home; they long to snuggle up to you in the cold.

Don't risk roadside repairs; cold weather work of this character is biting and bad.

Don't forget the filter.—*New York Times*.

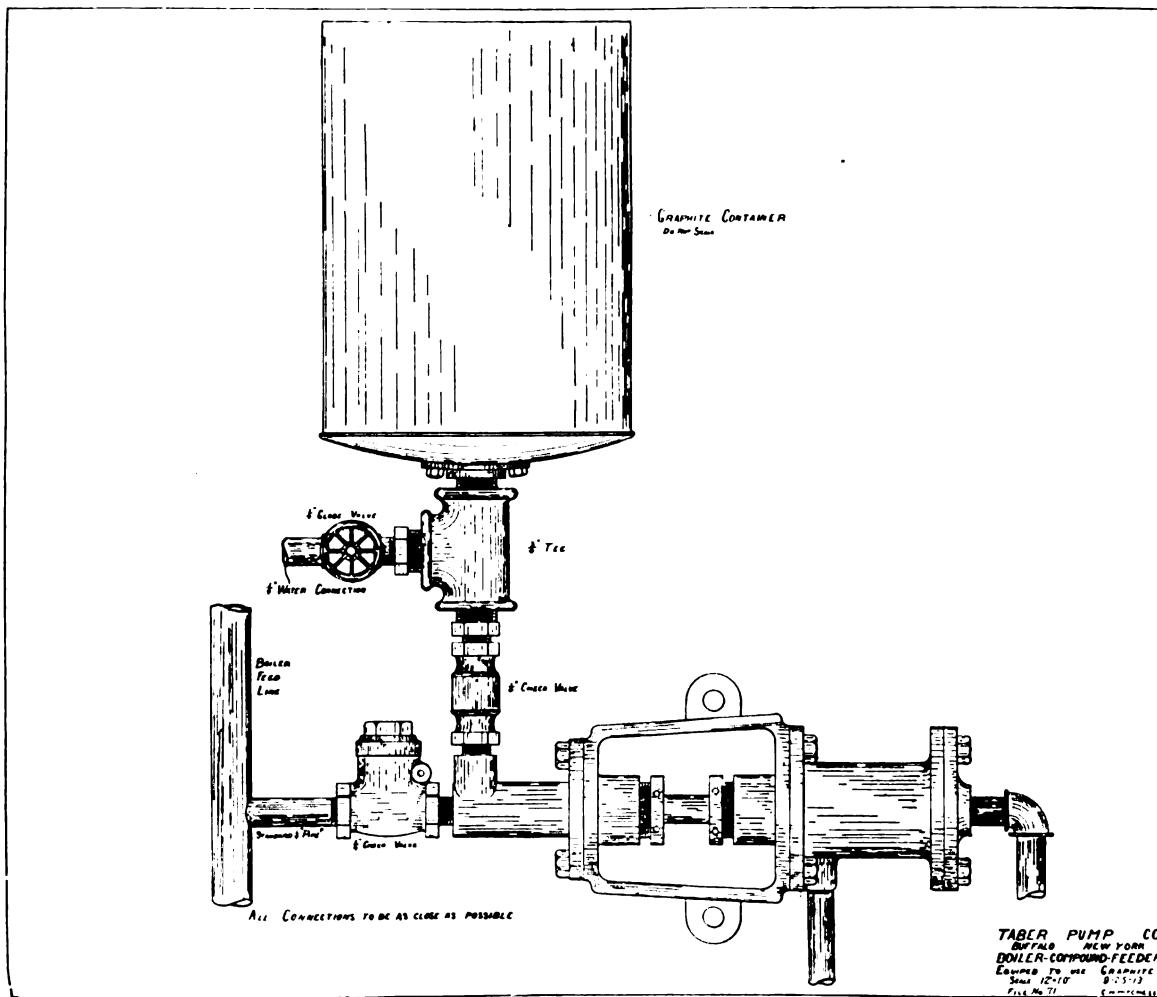
FEEDING GRAPHITE FOR LUBRICATING PURPOSES

Sometime ago Mr. H. W. Wakeman, expert steam engineer and author of well known books on steam engineering, wrote a series of articles for GRAPHITE. We made a reprint of these articles in the form of a small pamphlet. While much progress has been made in the matter of graphite lubricators since that time, yet all that Mr. Wakeman wrote is still valuable and very interesting. We have a few of these pamphlets left and shall be glad to send copy to any one interested.

"THE REAL MENACE"

There comes to us a little slip from Somers, Fitler & Todd Company, machinery and supplies, Pittsburgh, Pa., which reads as follows:

"Most things are dear when they're cheap. Last month we lost several thousand dollars worth of business because we wouldn't cut the price and a lot of fellows got something less than they expected. The real menace of our country today is PRICE CUTTING, not price maintenance."



BOILER COMPOUND FEEDER

Engineers differ in their ideas about the best manner of feeding compound to boilers, but most of them believe that it is better to feed a given quantity of compound to the boiler slowly throughout the day, instead of in one or two large injections.

In some plants home made devices are used for feeding the compound, but many are using devices manufactured specially for the purpose. One of the very best of these, in fact it is absolutely reliable and accurate, is the Taber Automatic Boiler Compound Feeder. It is operated by the stroke of the pump and you can readily understand its principle from the illustration.

The sketch shows the Taber Feeder especially constructed and connected for pumping graphite when used as a boiler cleaner. At each stroke of the pump, a small amount of graphite mixture is injected into the boiler feed line. This feature is what makes the pump particularly valuable. We know of but few devices now on the market that will continuously feed boiler graphite, which is perhaps more difficult to feed than any other material an engineer might use.

Dixon's Boiler Graphite is in daily use in hundreds of plants, many of which, due to the nature of products manufactured, cannot use a chemical compound. They had the choice of keeping their boilers clean by the arduous hammer and chisel method, or by the expensive method of purifying the water before it enters the boilers. Now they pump in a little graphite every day and keep their boilers in a clean and efficient con-

dition by the judicious use of the blow-off. The steam will contain no trace of graphite. An arrangement like the Taber Feeder, which is simple, positive in action and of small size, is almost a necessity in plants where the feed water requires treatment to prevent the formation of scale. This feeder is made by the Taber Pump Company of Buffalo, N. Y.

IF YOU WANT PROMPT ATTENTION

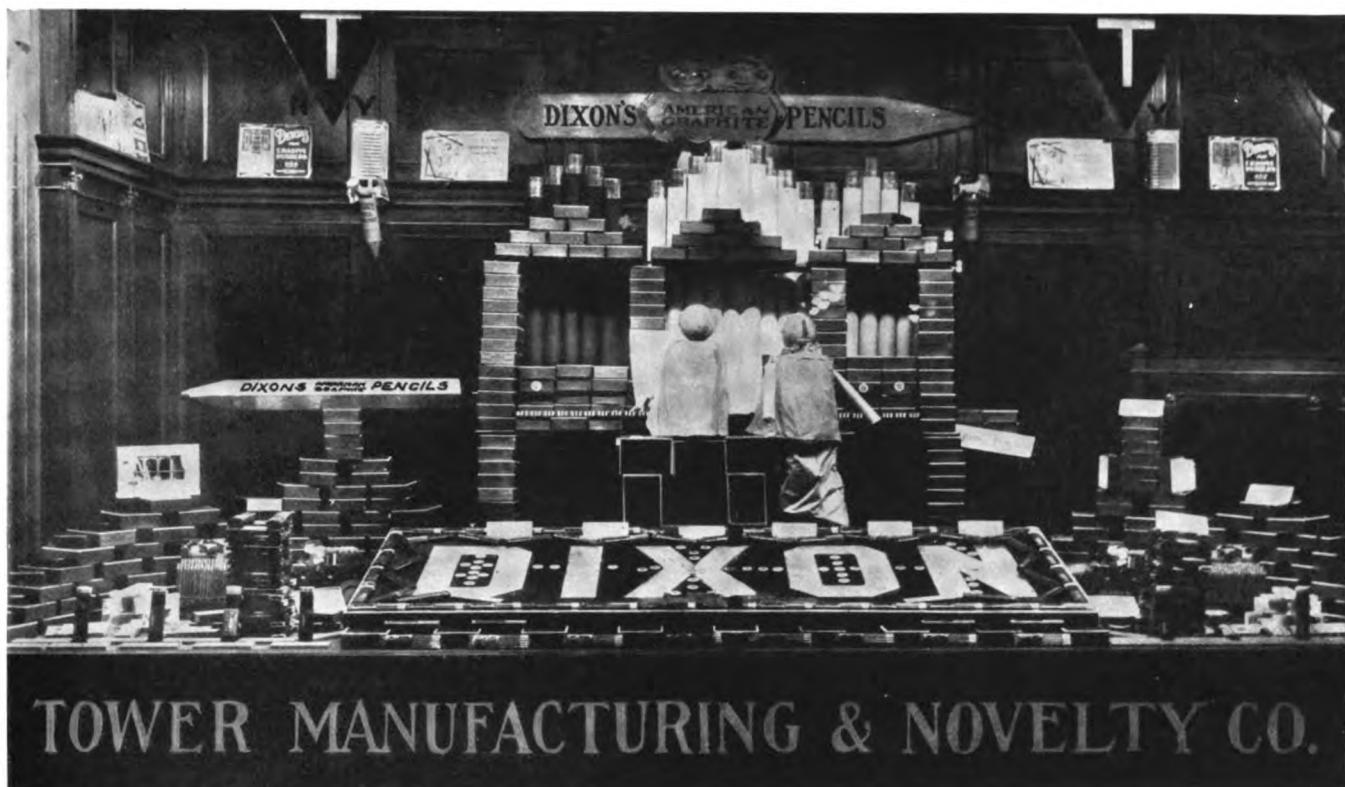
Don't address your envelopes to any individual in the company. Address your envelopes to the company, and if you want the letter to come under the eye of any individual, put at the head of your letter "Attention of Mr. _____."

Frequently the head of some department may be ill or away, and the mail boy puts the letters addressed to that individual in some particular drawer, or holds them until his return. Then your letter does not get attention and you get mad. There are many things that may fret you, and this may be one of them, but if it does, it is your own fault.

SOMETHING WE FORGOT?

The American Elevator and Grain Trade Journal says:

"The cleverly edited periodical GRAPHITE, published by the Joseph Dixon Crucible Company, of Jersey City, N. J., contained in the November issue a series of twenty-two 'Dont's'. Not one said: 'Don't fail to get acquainted with Dixon's Graphite Productions and the World-Famous Paints and Lubricants.' Hence we supply the omission."



TOWER'S DIXON DISPLAY

Anything from the "House of Tower" is akin to having the mark of sterling upon it. In the window display of Dixon's American Graphite Pencils, reproduced above, this same quality which distinguishes the merchandise and methods of the Tower Manufacturing and Novelty Company is just as apparent, and it is not an exaggeration to stamp this Dixon display as sterling.



Dixon Organ Assortment, after which Mr. Sam Clayton's window was designed.

Mr. Sam Clayton is one of the Tower Manufacturing and Novelty Company's salesmen, and his work as a window dresser entitles him to rank with those who have received a great deal more training and experience. The appearance of this window was so timed that a large number of those who attended the recent Stationers' Convention at Springfield might see it as they passed through the metropolis and also upon their return.—*Geyer's Stationer*.

NEW YORK AS A MANUFACTURING CITY

We read in *The New York Times* that the impression seems to have gone out that New York is handicapped as to its industrial facilities in comparison with other cities, usually smaller and farther west. This impression is the result of ignorance. Experts declare that for every factory which moves away from New York, ten new factories come into

existence, and five factories from somewhere else move in. The facts about the industries of New York City are notable. The public usually thinks of Chicago and Philadelphia as great manufacturing centers. But of New York it is often said: "New York is not a manufacturing city; it is commercial; trade is the breath of life in New York."

The fact is that New York City is the greatest manufacturing center in the world. New York's manufactured products—products actually made here, and not including those of nearby New Jersey—are greater than the products of Chicago and Philadelphia put together. Pittsburgh's products are but a drop in the bucket compared to those of New York. New York City produces almost one-sixteenth of the manufactured goods in the United States.

New York produces one-quarter of all the country's printed goods, and this includes newspaper and job printing, which is carried on at every four corners throughout the land.

New York produces more than one-half of the clothing of the United States.

There are over 700,000 men and women working in the factories of New York; this is considerably more than the combined factory populations of Philadelphia and Chicago.

There are more workers in factories in New York City than in Pittsburgh, Cleveland, Cincinnati, St. Louis, Detroit, Boston, Rochester and Buffalo combined.

SOME ONE has said "Open the Atlas and see how little you know about our geography." Ignorance of the respective sizes and depths of the oceans is very great. The greatest known ocean depth is approximately the same as the greatest land height, but the average depth of the ocean bed is about 12,000 feet as against the average land height above sea level of 2,300 feet. The Pacific ocean is over twice the size of our Atlantic Ocean. The greatest depth of the Atlantic Ocean is just north of the coast of Porto Rico.

JACK LEWIS



MR. LEWIS AS A MEMBER OF THE ROTARY CLUB

For the benefit of the vast minority of GRAPHITE readers who are unacquainted with the genial manager of the Dixon Company's Southern Territory, it may be well to at once introduce the subject of the cartoon which becomes this page of GRAPHITE, as Mr. J. H. Lewis.

Just what Mr. Lewis is doing is something of a problem. We at first thought that he was giving an imitation of the correct way to paddle a canoe. This thought, however, was abandoned after we had learned that the sketch was made by a fellow member of the Atlanta Rotary Club of which, by the way, Mr. John A. Condit, the Buffalo manager of the Dixon Company, is also a member in the latter city. We now feel sure that Mr. Lewis is merely demonstrating his ability to handle so big a proposition as Dixon's American Graphite Pencils and since noting the ease with which he maintains his standing as a pencil man, it might also be mentioned that he possesses an equal facility in disposing of Dixon Crucibles, Silica-Graphite Paint and Graphite Lubricants.

OF INTEREST TO USERS OF ROLLER AND BALL BEARINGS

There is always more or less criticism of any move that tends to get out of an old time rut. When the Dixon Company began to advocate the use of Ticonderoga Flake Graphite for the better lubrication of bearing surfaces, almost a howl went up at the idea of introducing a solid substance like graphite into bearings. Even those who had long made a practice of

using sulphur, white lead or even emery in their bearings, largely opposed the introduction of the thin soft flakes of Ticonderoga graphite into their bearings.

As years rolled on it was only the really cantankerous engineer or mechanic who refused to see the light and to recognize and accept the improved method of lubrication. Today throughout the entire world Dixon's Ticonderoga Flake Graphite is known, and favorably known, and more than that is considered indispensable if the best lubrication and economy is desired.

With the introduction of roller and ball bearings, there was a very plausible theory established that such bearings needed no lubrication. In time, however, it was found that the dry surfaces did require some lubrication, and then almost grudgingly the makers acknowledged that a very small quantity of very thin oil, just enough to moisten the surfaces, might not be objectionable. Later it was found that such bearings were improved by the oil.

Then some one more venturesome than others found that by rolling the balls in Dixon's Finely Ground Flake Graphite they received a coating that enabled them to run infinitely better than ever before and without any possibility of jamming.

From one venturesome fellow there came others, until finally users of roller and ball bearings found that such bearings properly treated with Dixon's Graphite were better lubricated, better surfaced in fact, than they could possibly be without graphite. Although we believe there is still some objection by some manufacturers of such bearings, the evidence in favor of graphite is gradually growing, as the following letter from Mr. Leete of the Universal Taximeter Cab Company, New York City, will show:

"It is with pleasure that I recommend Dixon's Graphite Automobile Lubricants. A remarkable instance in the cost of up-keep is the saving in ball bearings; the lack of wear is surprising. While the price is considerably higher than other lubricants, we can safely state that the use of Dixon's Graphite has saved us in the past twelve months at least thirty per cent. over the cheaper greases we were previously using."

UNIONS FOR STEAM PIPES

Steam pipe lines of large and medium sizes are fitted with flange unions corresponding to the kind of pipe used, which must be adapted to the pressure carried, but for smaller sizes such as are used in every plant for conveying steam to different places, some kind of union is used that must be screwed on and taken off with a forged wrench of suitable size, or a monkey wrench that can be fitted accurately to any union in use (with reasonable limits.)

Illustrations of such unions, methods of dealing with them, and how to prevent the unions from becoming unmanageable, is most interestingly shown in a little pamphlet made up from articles especially written for GRAPHITE by W. H. Wakeman, expert steam engineer and author of well known books on steam engineering.

Until our supply is exhausted, we will be very glad to send copy of this pamphlet to those interested.

DIXON'S graphite publications sent free upon request.

A REBUKE

DEAR OLD DIXON:—I am edified and duly impressed with your leading article in December GRAPHITE on "Non-College Men," impressed by the facts presented, and edified by my suspicion of the idea sticking in the back of the mind of the man who clipped that article and sent it to the Publicity Department for publication.

Of all futile controversies ever conducted, this College vs. World Education is the most unsatisfactory and incompetent. After all, what is college? I don't mean what is Yale or Harvard or Columbia or What-not, but what is college in the abstract and general? Nothing in the world but a *forcing bed* for intellects, operating on exactly the same principles as a florist's forcing bed. College provides no pemmicanized education, but *opportunity*, and offers all the paraphernalia for acquiring, in a few years—not knowledge but the habit of study. Colleges no more impart knowledge than a hot house temperature—moisture combination alone makes flowers.

College provides the atmosphere and medium for the development of the innate germ of intellect and, averaging all human nature (and ninety-nine of us out of every hundred at least, are "Average men") it benefits mankind to acquire a college training, no matter how great the natural brain endowment. Note the word "*training*." That's the keystone of truth's arch. College educations, except in the case of technical courses, are relatively useless, as such college *training* is as valuable as the inborn abilities, ambition and initiative of the individual makes it, and only that much. It is capable of being of as much value to a man of intellectual ambition as a marine's chart and compass are to a sailor. Some few men—Columbus was one of them—navigated without charts and "got away with it." But who of us today would cross the Atlantic on a liner that carried no chart, sextant, chronometer or compass?

Why does not some statistician write an article on the splendid achievements of one-armed men as an inferential argument in favor of amputation of one brachial member at birth? 'Twere about as important.

Remember, you Dixonites, that in the days when college education and college research in chemistry were young, your eccentric founder thought that graphite was "Carburet of Iron." Do you scorn what college laboratories have taught of chemical science since then? Not by a long sight you don't. You analyze your clays, graphites, oils and what not, so that you'll know how to handle them and if your present chemist doesn't happen to be a college man, it is well to recall that he got his knowledge out of the results of college facilities, somehow, somewhere.

I am impelled to cite you the old, old story of the countryman at his first circus. He'd heard about most of the animals and recognized them from the Chap-Book pictures of his childhood. Then he came to the camel and long he gazed at the humped back, the padded feet, the tawny, seemingly moth-eaten hide, the tapering snout. Turning to his wife he exclaimed in unutterable disgust: "Mandy, there ain't no such animal."—A SINCERE ADVOCATE OF GRAPHITE.

SOMETHING NEW "UNDER THE SUN"

In a recent issue of the *Pacific Motor Boat*, an amusing account is given of a motor boat trip up the Sacramento River.

Of particular interest to us and possibly to a number of GRAPHITE readers, is the following excerpt:

"We spent most of the morning scrubbing decks, washing clothes and lounging around in the sun, which as the day progressed, grew continually warmer. Everybody stripped to their sleeveless shirts and allowed Old Sol to get busy decorating their arms and shoulders. The skipper, having "been there before," was not noticeably affected, but his subordinate officers kept glancing with distrust at their fast reddening complexions. It was suggested that the black graphite grease used for lubricating the engine bearings would be a most efficacious remedy for sunburn, and taking this hint seriously, they solemnly rubbed the oily black stuff over themselves until they resembled the end men in a minstrel show. Whether a case of imagination or otherwise, it was unanimously decided that this was "great sunburn dope" and the grease can was in continuous demand for the rest of the trip, until it was finally found necessary to hide it in order to save some for Mr. Buffalo's (the motor's) personal use."

RECORDED EVIDENCE OF PAINT DURABILITY

The following is one of the many testimonials we are constantly receiving, which shows that Dixon's Silica-Graphite Paint is the best possible paint for metal roofing. On this subject we would particularly request correspondence with our Paint Department.

COOSA MANUFACTURING COMPANY,

• COTTON YARNS.

PIEDMONT, ALA., Oct. 28, 1913.

Joseph Dixon Crucible Company,

Atlanta, Ga.

GENTLEMEN:—We have been using the two barrels of Dixon's Silica-Graphite Paint, which you shipped us recently, on our No. 1 mill roof. We think, without doubt, that this is the best paint on the market. The writer has in charge some forty houses covered with Cortright Metal Roofing and finds those painted with Dixon's in far better condition than those painted with other paints. We keep a specific record on these houses, in order to get at the results and those painted with Dixon's Paint will last at least for a period of five years, while most of the others which are protected with other paints, will hardly last three years. When we paint the latter again, we will without doubt use your material.

Yours very truly,

COOSA MANUFACTURING COMPANY,

(Signed) GEORGE S. HASLAM.

IN A RECENT issue of a prominent trade journal there appears the suggestion that a thumb-tack be inserted near the rubber tipped ends of pencils so as to stop them from rolling. Like many other common facts easily forgotten, is that many pencils are made in hexagon shape to prevent this wanderlust.

There are some who object to the sharp edges of a hexagon shaped pencil. This objection is not sustained, however, when one writes with the new Dixon's Ticonderoga Pencil, a hexagon shaped pencil with its edges so rounded that no sharp edges are felt against the flesh.



THE JERSEY CITY POST OFFICE BUILDING

An interesting and most happy culmination of twenty years of effort was witnessed recently when, as the *Jersey Journal* says: "as distinguished a group of guests as has been here at a public function in years, augmented by thousands of spectators, participated in the dedication of Jersey City's million dollar Post Office at Montgomery, Washington and York Streets. This handsome edifice stands on the battle field of Paulus Hook, made famous in Revolutionary annals by the triumphant victory of Light Horse Harry Lee and his compatriots."

The new Post Office Building is of granite and replaces an old building which for many years before its use as a Post Office served as a private residence. The new Post Office is the newest of a number of prominent public buildings built in accordance with the modern demand for substantiality. The new Post Office as well as a number of other prominent buildings in Jersey City, contains a superstructure of steel protected from rust and decay by Dixon's Silica-Graphite Paint.

In spite of the proverbial parody that a "protective paint is not without use save in it's own city," is the fact that Dixon's Silica-Graphite Paint is not only well known in Jersey City, but used upon structures of such well known concerns as the Colgate Company, Lorillard Tobacco Company, A. B. See Elevator Company and Manning, Maxwell & Moore, Incorporated. Other structures protected with Dixon's Paint in Jersey City are the High School Building, Hudson County Court House, Free Public Library and both the Union Trust Company's Building and Commercial Trust Company's Building.

GRAPHITE THE RIMS

Although suggestions for cleaning and graphiting the rims have been made in these columns, there are many new owners who do not realize the importance of keeping the rims in first class condition. With the extra size tires being fitted, it

naturally follows that blow-outs are not so common as formerly when the shoes were overloaded. While no one likes to change a casing until obliged to, the work will be made considerably easier if the rims are maintained in proper condition.

With the approach of winter with its rains, it is a good plan to remove the shoes, clean and graphite the rims or use a preparation containing this material. Mix oil and powdered graphite together, making a very thick paste. Next clean the rims, smoothing up any rough places that may exist, and apply the graphite freely. Rub off with a cloth, which will impart a bright finish, leaving a surface that will resist the action of water or moisture, and which will make changing tires an easy matter.—*Automobile Journal*.

MORE ABOUT BOILER SCALE

In the Engineer's Study Course of *Power* the following is said relative to the prevention of scale in boilers:

"Recently, graphite has been brought into prominence as a scale preventive and many engineers will testify that it has produced beneficial results. Its action is mechanical rather than chemical. Fed into the boiler with the water at regular intervals and in stated quantities, it tends to form a coating on the heating surface of the boiler which prevents the scale from adhering. The graphite also intermixes with the crystals of the scaleforming impurities and prevents them from cementing solidly together, so that they exist only as a sludge or form of mud, which can be easily blown out."

ONE HUNDRED years ago, September 10, saw Commodore Perry's victory over the British fleet on Lake Erie.

A loan of \$16,000,000 was authorized by the United States Government to prosecute the war, and \$5,000,000 in treasury notes to be issued, which John Jacob Astor and Stephen Girard chiefly negotiated. We were going some even then. Getting our gait, as it were.

THE MAN WHO INVENTED THE AIR-BRAKE

When a youth, George Westinghouse was of an inventive turn of mind, and his genius for inventing things was stimulated by the fact that he was at work in his father's machine shop in which new inventions were now and then made. He was only fifteen years old when he invented a rotary engine, and when he was nineteen he invented a clever device for replacing railroad cars on the track. When he was twenty-two years old he invented the Westinghouse Air-Brake, which has been one of the most useful of modern inventions, while it has at the same time made its inventor one of the richest men in our country.

Before it came into existence the system of stopping railroad trains was crude enough. In the early days of the railroad, every car of a railroad train had to have its own brakeman, or one brakeman had to run from one car to another turning on the brake. Since the air-brake came into use trains stop themselves automatically in case of accident; while in ordinary running a train can be brought to a standstill in a very short distance by the movement of a single lever in the cab of the engineer.

Mr. Westinghouse has said that securing recognition for his air-brake was more difficult than inventing it. The most intelligent of railroad men were slow to recognize its utility and the young inventor was "turned down" again and again in his attempts to have the air-brake brought into use.

Railroad managers seemed to think that there was more "hot air" than anything else in his invention, and some of them looked upon him as only a young crank. Perseverance and an infinite capacity for patience were two valuable traits in the character of the young inventor, and he kept "pegging away" in his determination to win out. At last he was able to induce a railroad manager to give the air-brake a trial, and when a public trial was at last secured, the value of the air-brake at once became apparent and the young inventor's days of begging railroad managers to take him and his invention seriously came to an end.—*American Boy*.

CHEAP LUBRICANT IS POOR ECONOMY

How a Man May Lose a Couple Hundred Dollars by Saving Two

A. G. Thomson of the Joseph Dixon Crucible Company, spoke recently on "Lubrication of the Automobile" at the automobile school of the West Side Y. M. C. A., New York City.

"The lack of proper lubrication sends more cars to the repair shop than any other reason," said he. "A single trip to the repair shop will cost more than all the best grade lubricant the car will ever use. I know an instance where the owner of the car saved two dollars when he bought a cheap grade of oil, but improper lubrication sent the car to the repair shop and the bill was more than two hundred dollars."

"If you can run your car eight miles on one gallon of gasolene with cheap lubricants, you can run the same car ten miles on one gallon of gasolene with good lubricants. So at the present cost of gasolene the best oil is really the cheapest."

"Good oils are expensive to manufacture and it is utterly impossible to sell them at a cheap price. Cheap oils burn much more rapidly than the good oils. Study the lubricating problems of your own car. Different makes of cars require different lubricants and different parts of the same car must have different lubricants."

"Ninety per cent. of the automobiles in use will soon be using graphite, and the reason for it is very simple. To understand this problem of friction it is necessary to look at a piece of polished iron or steel through a powerful microscope and then it will be found that instead of being absolutely smooth, the surface is covered with minute holes and pin points so that it looks like a nutmeg grater. The object of lubrication is to keep two wearing surfaces apart. When simply oil is used, the oil is squeezed out from between the wearing surfaces. Graphite works on a different principle. Graphite first fills up the minute rough places on the iron and then forms a veneer between the two wearing surfaces."

"You must beware of the cheap graphite. Cheap graphite, instead of preserving the engine, will score and cut it."

—*New York Sun.*

PUSHING DOLLARS WITH DIXON'S PENCILS

The other day a man showed us a new use for a Dixon pencil. He pulled from his pocket a thin slab of wood, about the same size and shape as a postcard. In the center of the slab was a hole, *almost* as large as a silver dollar. Upon the slab was a printed invitation to "push a silver dollar through this hole without breaking this slab of wood." Our best efforts failed to accomplish the result and we voiced our conviction that the thing was a fake. "Not at all," asserted our visitor, and producing from his pocket a Dixon Pencil and laying the silver dollar upon our desk, he proceeded to elevate the slab of wood two or three inches above the dollar. "You will now observe," he remarked to us, "how easy it is for me to slip an end of this pencil through the hole in this wooden slab and push the dollar about at will." (There should have been steps here.)

We observed and after thinking the matter over, arrived at the conclusion that without the use of a Dixon Pencil the trick could not be accomplished properly.

If you use ordinary grease and oil in your car and forget to look after them—
Good Night!

DIXON'S

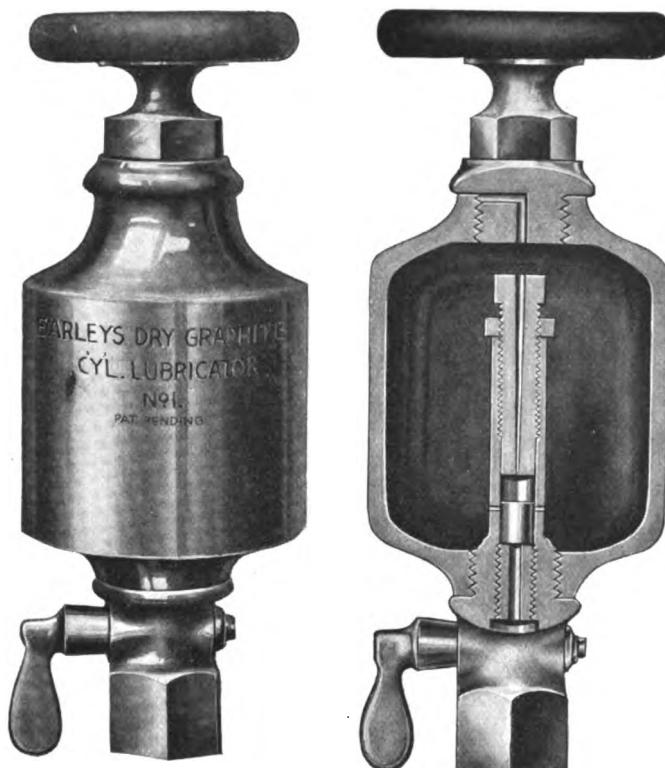
Graphite
Automobile
Lubricants

you put in at rare intervals and forget them altogether. They stay put and the longer they're used the better they become.

Ask your dealer for Dixon's Transmission and Differential Grease No. 677.

Made in JERSEY CITY, N. J., by the
Joseph Dixon Crucible Co.

Established in 1827



THE EARLEY DRY GRAPHITE LUBRICATOR

Through the courtesy of Mr. W. S. Earley we are privileged to illustrate and describe a new dry graphite lubricator, the invention of Mr. Earley. This lubricator is applied to all stationary engines, locomotives, air compressors and gas engines. Its operation is controlled by the pulsation incident to the admittance and release of steam, air or gas. The graphite is controlled by a regulator in the lubricator and can be adjusted so fine that six ounces, which is the capacity of the lubricator, will last a week, which is sufficient under all conditions.

It is claimed that this lubricator will save more than half the cost of lubrication; that it gives a positive, accurate and automatic feed, something which has never before been accomplished by graphite lubricators even with complex, intricate mechanical contrivances, which are costly and apt to get out of order.

The Earley Lubricator, it is said, cannot get out of order and is indestructible. It has been shown to some of the very prominent mechanical engineers and quite a number of chief engineers, and it has appealed to them all.

It is the wish of Earley's Dry Graphite Lubricator Company, Windsor Hotel, Philadelphia, Pa., that it be distinctly understood that they do not advocate lubrication without oil or grease, but that they do advocate the very great reduction in the quantity and the rate of feed of oils and grease made possible by the Earley Lubricator.

It is gratifying to the Dixon Company to add that the inventor of this dry graphite lubricator is a thorough believer in the efficiency of flake graphite as a lubricant and that only Dixon's Ticonderoga Flake Graphite is used, recommended and furnished for the Earley Lubricator.

Fair Ones—"Will your dog bite us?"

Navvy—"I shouldn't be surprised, miss. 'E's got an uncommon sweet tooth!"

THE MEXICAN SITUATION

Babson in his report says: "The Mexican strife is really a conflict between those who 'have' and those who 'have not.' Or, to use more technical language, it is between the large land proprietors and the peons, who are practically slaves. In other words, the agrarian question really underlies the entire Mexican trouble. Mexico, so far as the tiller of the soil goes, is largely where England, France and Germany were a century or more ago under the reformed feudal system. Every day the old fashioned, contented Mexicans are dying off and the younger generation are becoming more enlightened and progressive. American intervention can do nothing to bring about a permanent peace until some arrangement is made to enable the people to more easily become land owners, either through grants or through the purchase and re-distribution of land by the government."

"The United States once had a similar problem in the Philippines. Clients will remember that the United States made very little headway in pacifying the natives until we purchased the Friar Lands and enabled the Filipinos to become actual owners thereof. After the purchase of the Friar Lands, both parties settled down and we have since had little trouble in maintaining order. Every old nation has passed through these agrarian troubles, and the result has always been the same; namely, that the big, landed proprietors must in some way give up a large portion of their property. When the landed proprietors of Mexico agree to such a plan, the country will immediately settle down and peace will once more be restored."

FROM CHINA

We are told that the following are Chinese proverbs. Some of them may be useful to take to one's self for the coming New Year.

"The error of one moment becomes the sorrow of a whole lifetime."

"The gem cannot be polished without friction, nor the man perfected without trials."

"A wise man forgets old grudges."

"Riches come better after poverty than poverty after riches."

"A bird can roost but on one branch."

"You cannot strip two skins off one cow."

"The gods cannot help a man who loses opportunities."

"Eggs are close things, but the chicks come out at last."

"Borrowed money makes time short; working for others makes it long."

"Those who cannot sometimes be deaf are unfit to rule."

NEW YORK STATE MUSEUM

In its publication *The Mining and Quarry Industry* 1912, has this to say in regard to graphite mines:

The mine of the American Graphite Company at Graphite in the Adirondacks, owned by the Joseph Dixon Crucible Company, continued as the main producer. This mine has had an enviable record and is still the most successful of its kind in the state or in this country; it has been the pioneer in all that relates to the technology of treating the disseminated flake graphite, which constitutes the principal source of the domestic production.

DOING BUSINESS IN SOUTH AMERICA

Speaking of the countries of Colombia, Panama, Peru, Bolivia, Chili, Argentine, Uruguay, Brazil and Trinidad, Barbados and Jamaica in the West Indies, these countries represent a population of nearly fifty million people. They are splendid people, cultured, refined, educated, extremely sensitive and sincerely hospitable.

The friendly feelings which exist between the United States and South America should be encouraged and this can best be accomplished by more frequent visiting of the people of North and South America. No nation can live alone and flourish, and only by the expansion of commerce and friendly trade relations with our neighbors can we grow. Among the lessons brought back by the members of the Boston Chamber of Commerce are the following:

"North American made goods will sell on their merit and in larger quantities if you will but heed the suggestions so often made—some of which are as follows:

"Do business with these people in their way of doing business.

"Select men to represent you who speak the native tongue and who are familiar with Latin-American customs.

"Remember that Spanish is spoken in all Latin-American countries with the exception of Brazil, where Portuguese is the native tongue.

"Write letters in the language of the people you intend to do business with.

"Sign your letters in ink—typewritten signatures are repulsive.

"Put sufficient postage on letters and see that they are properly addressed.

"Have catalogue price lists printed in Spanish or Portuguese, according to the country they are being mailed to.

"Study your customers' needs, be familiar with duties and freight rates on the merchandise you are offering for sale.

"Remember that the seasons in South America are the reverse of ours—that in many countries rains are frequent and heavy and dampness very common, that any merchandise affected by dampness will arrive in bad order unless cases are properly lined with waterproof materials and exposed parts of machinery and other merchandise are properly protected.

"Pack goods securely with extra heavy cases. Follow carefully the directions laid down by the buyer—if he asks for a special size case, give him what he wants, for there is always a sufficient reason for any request regarding packing and shipping. Some goods must be transported inland on the backs of llamas or donkeys and a special size of packing is required. Our competitors in business cheerfully comply with the smallest detail of these matters and if it costs a trifle more to pack goods differently than you are accustomed to do, add the difference in cost to price of the goods, if need be.

"Above all things, keep your promises; ship goods exactly and promptly as agreed—broken promises by our merchants have lost for us many re-orders.

"Never substitute—even though you may send an article of greater value, it will not meet with approval.

"Do not change styles too often—transportation is slow and when a dealer builds up a business on a certain style or article, continue to supply him with the goods he re-orders.

"If you ship goods through a commission house, see that

but a set of numbers are used on packing cases. Factory numbers and additional numbers by the commission agent cause confusion and delay in the custom house, much to the annoyance of your customer.

"Pack advertising matter in the cases with goods—if shipped separately a duty is imposed for printed matter, and if the print is in colors it adds to the duty.

"Avoid shipping goods by parcel-post or express. If by the former, delivery is very uncertain; if by the latter, it is vastly more costly and no quicker than freight.

"Avoid shipping goods in steamers that transport oil or gasoline; port regulations are strict and often these steamers are required to anchor for days before being permitted to dock."



LUMBER CRAYON OR SALAMANDER?

The accompanying illustration is of a Dixon's No. 522 Green Lumber Crayon, received recently by our Philadelphia office. The crayon which was accompanied by an interesting note, is evidence of the great durability and salamanderlike qualities of Dixon's Lumber Crayons. This particular crayon, we are informed, was taken from a fire which occurred in a store house of the Baltimore and Ohio Railroad at Mt. Clair, Baltimore. The marking qualities of the crayon seem to be in nowise affected.

STEAM TRAPS

Steam traps are made use of wherever steam is used for heating or drying purposes, also where long pipe lines must be employed for conducting steam to engines and pumps, as the traps save enough in a short time to repay their cost, thus proving a profitable investment.

Some steam users seem to think that a trap is only a luxury to be enjoyed by those who have expensive plants in operation and wish to show many extra appliances which might be dispensed with, and not be missed. This is a great mistake, as a trap is valuable according to the cost of fuel that must be burned to make the steam.

The several varieties of traps with valuable suggestions by W. H. Wakeman, who is so well known, are given in a small pamphlet entitled "Steam Traps." We have a small supply of these pamphlets left, copy of which will be sent to those who make prompt application.

PAINT

"Paint," says *Life*, "is used on houses, park settees, fences and faces. It comes in colors. Red paint is used on towns by young college men and old deacons. Fresh paint is used by children when they have their new clothes on."

"Paint is also used on sign boards which are put up everywhere to improve the scenery. No American scenery is considered complete without them."

But the greatest of all uses for paint is for the protection of modern structural steel and iron and for this purpose nothing quite equals the superb service of Dixon's Silica-Graphite Paint. May we help you prove it?



Are You "Looking Up" Pencil Sales, Mr. Dixon Dealer?

Good window displays help to increase them, and so do posters, show cards, hangers, booklets, blotters, circulars, etc. Hundreds of stationers have increased their sales of

Dixon's American Graphite Pencils

by asking us for advertising display matter. Send us particulars about the space you can use and the pencils you are selling and we shall be glad to use our best judgment in selecting suitable display matter for your particular needs.

**Joseph Dixon
Crucible Company**
Jersey City, N. J.

GRAPHITE

VOL. XVI.

FEBRUARY, 1914.

No. 2.

Issued in the interest of Dixon's Graphite Productions, and for the purpose of establishing a better understanding in regard to the different forms of Graphite and their respective uses.

TWENTY YEARS AGO

Twenty years ago the Dixon Company started out to more largely interest the locomotive engineers of the United States in Dixon's Lubricating Graphite. It was a task beset on every side by what appeared to be insurmountable obstacles. The leading railroad companies were under contract for the lubrication of their rolling stock, and the oil company having the contracts had been highly successful in reducing the cost of lubrication to the railroads and had stipulated in their contracts that no lubricant other than their own should be used.

The satisfaction given the railroad companies by the oil company, caused the superintendents of motor power to not only hesitate in permitting the use of any lubricant, but to positively forbid the use of any other lubricant, and especially to forbid the use of graphite, as they had had some bitter experiences with ordinary plum-bago, black lead, or graphite.

The Dixon Company came forward with a proposition that a proper use of Dixon's Pure Flake Ticonderoga Graphite would not in any way interfere with the contracts made by the railroad companies with the oil company, and would overcome the difficulties which the oil company had failed to cure. It had been pointed out by superintendents of motor power and master mechanics, that in spite of the best efforts of the oil company, there had been much delay on the roads because of friction. It had been pointed out by one superintendent of motor power that fifty-three per cent. of all their train delays had been caused by friction and overheating of moving parts.

Nevertheless the railroad officials positively forbade the use by the engineers of Dixon's Graphite. Having firm faith in the efficiency of its flake graphite and believing that in the end the railroad companies would be glad to recognize its value, samples and printed matter were sent to engineers and the request made that when everything else had failed, to try some of Dixon's Flake Graphite. After sending out hundreds of samples we started out to get results. We got them, but each engineer stipulated that his name should not be used and that he preferred that we should even omit the name of his home town, as the railroad companies and the oil companies

were positive in their instructions that graphite should not be used. One large railway company, now a large user of Dixon's Ticonderoga Flake Graphite, went so far as to put up a notice in one of its roundhouses to the intent that any engineer making use of graphite on his engine would be discharged if caught. The result of this notice was that so many engines were sent to the "back shop" for repairs, that the attention of the superintendent of motive power was called to it and the order was rescinded when the facts became known.

After hearing very generally from the locomotive engineers, the Dixon Company published a little pamphlet entitled, "The Boys Have Something to Say About Dixon's Pure Flake Graphite." The following are some extracts:

"I do not know what the officials think about our using it, but have heard that they will not allow the engineers to draw it at some points. When engineers are allowed to use it I know they find it a great help."

"I put some of the graphite into a hard-grease cup and filled the cup with hard grease, and have had no trouble with the bearing since."

"I can honestly say there is nothing equal to Dixon's Graphite in the market for cooling off eccentrics, crank-pins, driving boxes, truck-boxes, guides or any bearings on an engine. By using it on valve seats the lever can be handled with one hand with a full throttle." That man however, was not new to the use of Dixon's Graphite, for he had been using it for twenty-five years and was one of the expert engineers on the Pennsylvania Railroad. At that time he was running an eighty-five ton locomotive on the New York division of the Pennsylvania Railroad, at a rate of speed of not less than fifty miles an hour.

All of the testimonials which came to us from engineers, master mechanics and general foremen, are very interesting, but today the question of graphite lubrication with Dixon's Pure Flake Ticonderoga Graphite is an old one, as this material is now used and well known throughout the world. We number among our customers over 250 railroad companies, who may be classed as "satisfied customers."

THE Disappearing Club—An organization composed of salesmen who take only an occasional drink and only now and then "sit in" a game of poker.

Primary Symptoms—Orders become small and irregular. They consist only of staple goods sold from a want list.

Secondary Symptoms—Letters unanswered. Expense account irregular. Temperature high.

Tertiary Symptoms—Patient joins the Disappearing Club. Time has arrived to recover samples.—**MIKE KINNEY.**



ESTABLISHED 1827



INCORPORATED 1868



JOSEPH DIXON CRUCIBLE CO. JERSEY CITY, N. J., U. S. A.

**Miners, Importers and Manufacturers of Graphite,
Plumbago, Black Lead.**

OFFICERS:

President—GEORGE T. SMITH
Vice President—GEORGE E. LONG
Secretary—HARRY DAILEY
Treasurer—J. H. SCHERMERHORN
Ass't Sec'y & Ass't Treas.—ALBERT NORRIS

DIRECTORS:

GEORGE T. SMITH	GEORGE E. LONG
WILLIAM MURRAY	EDWARD L. YOUNG
WILLIAM G. BUMSTED	HARRY DAILEY
J. H. SCHERMERHORN	

OFFICES AND SALESROOMS:

NEW YORK SALESROOM, 68 Reade Street.
 PHILADELPHIA SALESROOM, 1020 Arch Street.
 SAN FRANCISCO SALESROOM, 155 Second Street.
 CHICAGO OFFICE, 1324 Monadnock Block
 BOSTON OFFICE, 347 John Hancock Building.
 PITTSBURGH OFFICE, Wabash Terminal Building.
 ST. LOUIS OFFICE, 501 Victoria Building.
 BALTIMORE OFFICE, 1005 Union Trust Building.
 BUFFALO OFFICE, 72 Erie County Savings Bank Building.
 ATLANTA OFFICE, Fourth National Bank Building.

EUROPEAN AGENTS,

Graphite Products, Ltd., 218-220 Queen's Road, Battersea, London.
 SOUTH AMERICAN AGENT,
 Alfredo J. Eichler, 666 Calle Cangallo, Buenos Aires, Argentine.
 CUBAN AGENTS,

For all Products Except Dixon's American Graphite Pencils
 Croft & Prentiss, Room 424 Lonja Building, Havana.
 For Dixon's American Graphite Pencils.
 Harvey & Harvey, Empedrado 30, Havana.

ANOTHER HOUSE ORGAN

The Walworth Manufacturing Company of Boston came out January 1st with No. 1, Vol. I, of *The Walworth Log*.

It is a most attractive little publication that will be published monthly in the interest of the well known products of The Walworth Company.

An illustration on the front page shows a "New England Built Clipper Ship," which was the type of vessel which brought pipe made from gun barrels to Walworth & Nason in 1842.

GRAPHITE

February, 1914.

The *Walworth Log* will be a monthly publication devoted to the cause of larger business,—“ours and our customers.” Each number will contain articles contributed by the officers or department heads of The Walworth Company. These will talk of manufacturing and selling, metal market, and general trade conditions.

The present number of *The Walworth Log* is evidence that they are starting out in accordance with their determination, and we have no doubt that they will continue.

Mr. Wm. P. F. Ayer, general manager of sales of The Walworth Company, has an article entitled “Increasing Sales,” and it is, we believe, of enough interest to warrant our reproducing it elsewhere in this number of GRAPHITE.

OLDEST TRAVELING SALESMAN QUILTS

Mr. George A. Olney, who is said to be the oldest traveling salesman in the United States, formally “quit the road” the first of the year after a service of fifty-eight years. A banquet was given him by the Kansas City traveling men. Mr. Olney is seventy-nine years old, and will take up his residence at his home in Brooklyn, N. Y.

There appeared in December GRAPHITE a double picture of Mr. Olney and Mr. A. K. Ingraham, who is connected with the Boston office of the Joseph Dixon Crucible Company. Mr. Ingraham is two years younger than Mr. Olney and will now succeed to the position vacated by Mr. Olney as the oldest traveling salesman in the United States.

CLEANING MATRICES

A reader of the *Linotype Bulletin* makes the following inquiries in the “question and answer” column of that interesting house organ: We enclose a matrix which has been cleaned by a new process or solution, which was offered to us by a party who wanted to sell us the formula on condition that we did not give it to anybody else. He claims that it does not eat away the brass. Is it possible for any solution to be used on brass without destroying the matrix by eating it away? Kindly advise us, as we do not want to ruin our matrices.

“Without knowing what this solution is,” write the publishers of the *Bulletin*, “we cannot, of course, tell what its effect on matrices would be. We do not, however, recommend the cleaning of linotype matrices with any sort of solution. Years ago it used to be the custom to clean matrices with benzine, as this removed the grease and dirt. It was found, however, that this was actually harmful to the matrices, and that it was better not to have them too clean. The effect of the benzine in taking off every particle of grease and dirt is to open up the pores of the brass, so that metal will adhere to the matrices. A much better way to clean matrices is to rub them on a board or other hard surface covered with a little graphite. This tends to make the matrices smooth and fill up the pores, so that the metal will not adhere to them.”

TOO SUSPICIOUS

“Why are you so angry with the doctor?” asked Mr. White of his wife.

“Because,” she replied, “when I told him I had a terribly tired feeling he told me to show my tongue.”—*Lippincott's*.



PAINTING THE TOWN WITH DIXON'S

Chestnut Street and a view of the business section of Philadelphia is obtained from the picture above. In the foreground is the new and magnificent Hotel Adelphia (No. 1), erected from the plans of Mr. Horace Trumbauer, an architect to whom many other well known structures owe their beautiful and impressive characters.

Just back of the Adelphia stands the Wanamaker Department Store Building (No. 2), which extends to almost the extreme right in the picture and is one of the most imposing structures of its kind in the world.

Further on down Chestnut Street and showing in our picture as the largest skyscraper in sight, is the Pennsylvania Building (No. 3).

In the extreme foreground and at the extreme left is a side view of the front of the Bailey, Banks and Biddle Building, (No. 4), which is almost directly across the street from the Hotel Adelphia.

And on the extreme right may be seen the tower of the *Philadelphia Evening Bulletin* Building (No. 5).

The steel work of all of these structures mentioned is protected by Dixon's Silica-Graphite Paint, which fact forms striking evidence of the widespread use of Dixon's Paint, and also belies the reputation which Philadelphia bears as a sleepy town.

The erection of the Hotel Adelphia was carried on from Mr. Trumbauer's plans by James G. Doaks & Company, General Contractors. The steel work was erected by T. A. McAvoy, Incorporated, of New York City, and the final coat of Dixon's Silica-Graphite Paint applied by the Philadelphia Iron Structure Painting Company.

A GOOD savings bank and own your home maxim we find in Shakespeare.

"Neither a borrower nor a lender be;
For loan oft loses both itself and friend,
And borrowing dulls the edge of husbandry."

And for a golden text we may take,

"This above all,—to thine own self be true;
And it must follow, as the night the day,
Thou canst not then be false to any man."

GRAPHITE AND ITS USES IN INDUSTRIES EXPLAINED

Mineral's Commercial Value to Manufacturers Great. One of the First Peculiarities Noted of Carbon was its Marking Ability; Other Discoveries Followed

In the first of a series of four supplements exploiting Chicago as the world's greatest railroad supply center, the *Chicago Evening Post* recently published the following comprehensive article concerning graphite and its many uses.

"Graphite, a mineral, is one of the natural forms of carbon, belonging to the same family as the diamond, the diamond being the hardest form of carbon and graphite the softest.

"There are many conditions which determine the commercial value of graphite, such as its physical formation, its unctuousness or lubricating quality, and the use to which it is put. Graphite enters into practically every known manufactured product, either directly or indirectly. Its largest fields are for lubrication, manufacture of graphite crucibles, electrical apparatus, manufacture of paint, pencils, stove polish, etc., and for each particular purpose its physical formation largely determines its value. For instance, graphite for manufacturing crucibles must be of a quality the flakes of which are heavy, tough and with surfaces more or less irregular to enable them to stick to the binder used.

"Graphite is found in practically every country and appears most frequently of a low grade, amorphous variety, the refining of which would be an expensive operation and the product of such a low grade that it would not pay to work the prospect. In this connection it is probably safe to say that relatively there has been more money lost in graphite ventures and developments than in any other mining speculation.

FLAKE GRAPHITE PROVED SUPERIOR

"Many years ago it was proved conclusively that graphite of the flake formation, such as comes from the mine at Ticonderoga, N. Y., is far superior to any other grade for lubricating purposes. This conclusion was arrived at after carefully conducted tests by eminent authorities, and careful observance of the performance of graphite in practical operation.

"One of the first peculiarities noted of graphite was its marking ability. Our first pencils consisted of the rough unfinished ore. Because of this property of marking it was believed to be a form of lead, and hence the names "black lead" and "lead pencil." Black lead is now the trade name of the cheaper forms or inferior grades of graphite, plumbago of the Ceylon product and graphite of the American variety. Records show that the first graphite imported into this country was by Joseph Dixon, about one hundred years ago, and used for making graphite crucibles. From this small beginning there has grown a large variety of graphite products and manufacturing processes in which graphite is used in some form or other.

"If metal surfaces are examined under a microscope it will be noticed that all are more or less rough, having the appearance of hills and valleys. It is rubbing of the high spots that causes friction losses and wear. Flake graphite becomes attached or pinned to the high spots, building up over the whole metal surface a thin, tough, veneer-like coating of marvelous smoothness, making a graphite-to-graphite contact instead of a metal-to-metal contact. By its use hot boxes are cured, friction losses reduced, high efficiency obtained and

better operation insured. Flake graphite is absolutely inert, is unchanged by acids or alkalies or any temperature encountered in the engineering profession, thus making its field practically unlimited.

IS NOT A COMPETING PRODUCT

"Graphite is not a competing product with oils and greases, as will be pointed out later, but rather is a substance which stimulates their lubricating value and helps them to perform their arduous duties. The reason why graphite is not more generally used alone—that is, without oils and greases—is because of its extreme lightness, which prevents its being evenly distributed over the surfaces. Therefore it is ordinarily used to best advantage with oils and greases which serve as a carrier.

"We have often wished, perhaps, that graphite would not settle in the lighter lubricating oils, as of course this would be at first glance an ideal condition. Much has been heard in regard to graphite oils, but after careful consideration of the first principle of graphite lubrication it will readily be seen why this is impractical. As said before, the primary requisite of graphite as a lubricant is that it gets to the metal surfaces; or, in other words, it is a surfacer, and would be absolutely of no use if it were not for this property. A graphite which does not settle readily in oil will not become permanently attached to the metal surfaces, but will be floated away from them. This phenomenon is illustrated by simply noting the sharpening of a steel tool upon an oil stone. It is necessary to occasionally squirt oil upon the stone in order to float the microscopical particles of metal out of the pores so as to renew the cutting power of the stone, that the steel edge may come into contact with the stone.

USE OF GRAPHITE EXPLAINED

"In a similar way, powdered graphite of extreme fineness is floated away from bearing surfaces and carried out of the journal box with the oil. Therefore a graphite which does not become firmly fastened upon the metal surfaces, but is simply carried through the bearing with the oil, defeats its purpose, as comparatively little good can result from its use. On the other hand, it is obvious that a thin, flake graphite which settles in the oil will reach the surfaces intended to be lubricated and will become pinned fast to the metal by the pressure of the bearings.

"The claim is made that wherever there is mechanical movement, some form of graphite lubricant may be used to advantage. Today graphite is successfully lubricating machinery of the most ponderous and heavy parts down to the light, delicate mechanism of the air brake system of railroads. An especially interesting application of graphite as a lubricant is its use for lubricating air compressor cylinders. Many disastrous accidents have been traced to the volatilization of inferior grades of lubricating oil. The vapors going over into the air line or receiver tank form a powerful explosive mixture, which, if ignited in any way, causes a most violent and destructive explosion. By the use of flake graphite the danger is eliminated, because the use of oil may be entirely done away with, or the amount used reduced to a minimum. Graphite may be introduced into the air intake by means of a special graphite lubricator or by mixing with soapsuds."

DIXON's graphite publications sent free upon request.



**NOTED SOUTH AMERICAN RACING DRIVER
NOW IN ENGLEWOOD, N. J.**

Winner of Gruelling Thousand Mile Race Across the Republic of Uruguay Settles Down in New Jersey

When Frank Phillips recently opened a garage at Englewood, N. J., and among other things began to push the sale of Dixon's Graphite Automobile Lubricants, but few of his patrons recognized in him the popular idol and champion of South American automobile enthusiasts.

There were some, however, who recalled Phillips as the man who won the longest and greatest endurance race ever held on South American soil, and that the course over which he drove his Stoddard-Dayton against such foreign cars as the Fiat, Mercedes, Benz, Lancia and DeDion Bouton, was very probably the most difficult ever traversed by a motor car.

The race which stamped Phillips as the premier automobile pilot of a continent was from Montevideo, the capital city of the republic of Uruguay, to Salto, a city located in the north-western part of the republic on the border, and back again to Montevideo.

This race, which marked an epoch in the invasion of the automobile in South America, was a tribute to the progressive spirit of both the people and press of Uruguay, for it was under the auspices of the *La Tribuna Popular*, a Montevideo newspaper, that the race was held and the greatest accomplishment of the race was to bring forcibly before the people and the government the great necessity for better roads.

In the United States there is but one race to even suggest the difficulties encountered by Phillips. The annual run from Los Angeles to Phœnix over desert sand is suggestive of only a part of the country across which Phillips was obliged to run his car. From Montevideo to Salto and back again is a distance computed to be 800 miles, but due to the deplorable conditions of travel which then existed, it was necessary for the thirteen contestants entered in this race to travel nearly 1,000 miles. The country traversed was wild and unsettled, with neither roads nor in many places even pathways. The course was often over rocky ways and desert sand, or if not that, through mud and water holes, bridgeless rivers, swamp land, etc.

The hardships encountered made this race one of the most remarkable tests of automobile construction and equipment ever held. In relation to his experiences Mr. Phillips

wrote, "Do not forget I used Dixon's," and this is indeed a tribute to Dixon's Graphite Automobile Lubricants.

How long Mr. Phillips will be content to remain at Englewood without the pride of glory which surrounded his achievement in our sister republic, may only depend upon the time when the wanderlust again seizes him, for it is certain that his interests in Englewood, although prospering, will not forever hold him from blazing another path to automobile fame and fortune.

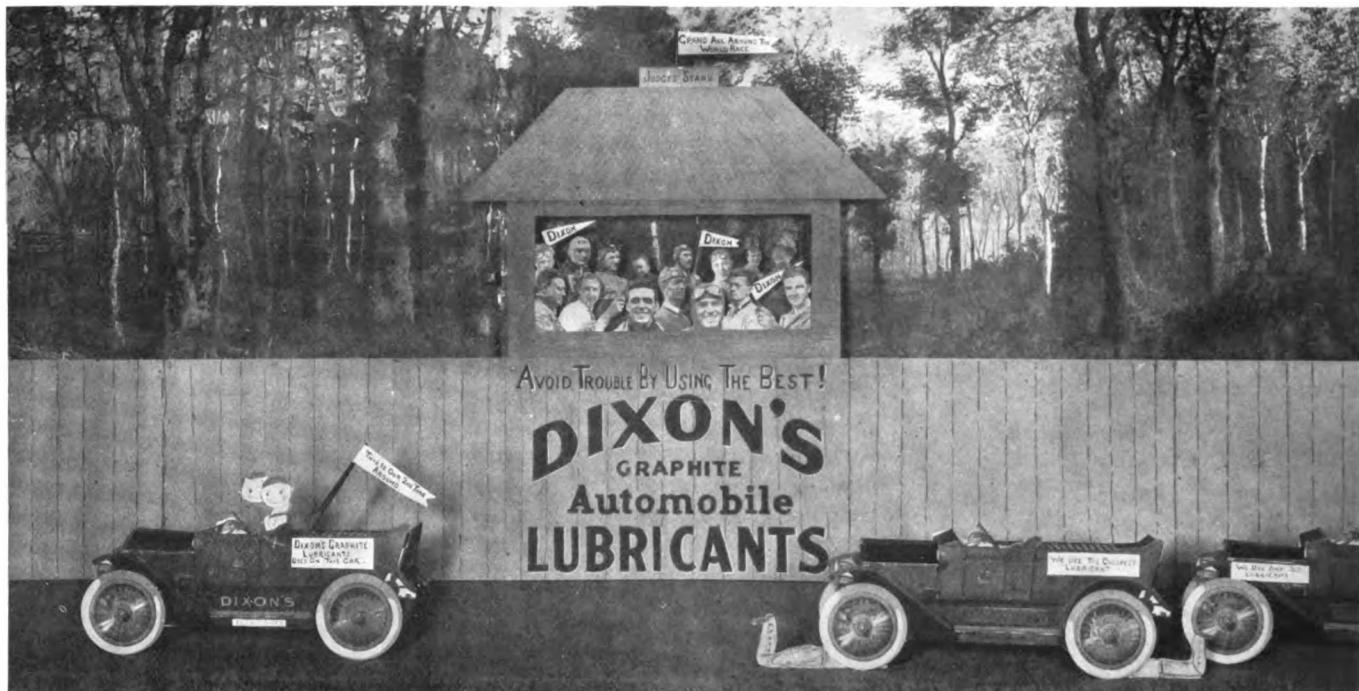
ANTICIPATION

A Western writer scoffs at the old saying, "anticipation is the greatest of delights!" He says anticipation is not for him—that if some one promised him an automobile all lubricated up with Dixon's Graphite Lubricants, he knows fully well that before it was delivered to him it would back-fire, the gasoline tank explode and Dennis would be the name of that machine. He tells us that he has never been able to make good on anticipations. That when he was a boy, if they told him on Monday that there would be ice cream on the following Sunday, his brother Ed would go around smiling and saying, "Yes, sir," and, "No, sir," and "I'll do it mother, dear." He would say this because he was anticipating, but it did not work with him. He always clung to the "many a slip" idea, and he would say to Ed, "what are you grinning about and why all this vain good behavior? Maybe we get that ice cream and maybe we don't. If a fly gets drowned in the cream Ma will throw the whole thing away. A neighbor is liable to borrow the freezer and take it to a picnic and never bring it back. Almost anything is liable to come between us and ice cream next Sunday. Even if the cream does materialize forty-one neighbors will come dropping in and keep coming until you and I will get only about a spoonful." He tells us that whenever he has thought himself the most valuable man the boss had in the Dixon Chicago branch and slated for a promotion, he has said to himself: "Look out, there! A fellow expecting to be promoted is liable to be canned!"

At one time he used to look forward to Christmas, but he was sick three Christmases in a row and that cured him. Once he got along until just the day before Christmas. Then he was taken sick and the doctor said that if he ate nuts and Christmas candy it would certainly kill him. No more anticipation for him, no matter what it may be.

"FRIENDS FOR FORTY YEARS"

Mr. A. H. Berry, a Boston manufacturer of ventilating fans, recently received a Dixon's Anglo-Saxon Pencil from the Dixon office in that city. It prompted him to make the statement that he had used Dixon's Pencils for over forty years, practically ever since the Dixon Company began making the American Graphite Pencil. His favorite has always been Dixon's American Graphite M, which has run uniform and satisfactory year after year. New styles of Dixon and other makes of pencils have never appealed to Mr. Berry. All of his pencil requirements are fulfilled in one grade, one shape and one color. His first and only pencil love was acquired during the years he served as a school principal.



ODD DISPLAY OF DIXON'S GRAPHITE AUTOMOBILE LUBRICANTS

A unique display of Dixon's Graphite Automobile Lubricants was recently arranged in the windows of the Bi-Motor Equipment Company of Boston. This display, a reproduction of which appears on this page, is unique in that it does not display a single can of Dixon's Lubricants. It is rather a display of cause and effect and the story it tells is a masterpiece of graphic art. Note the happy expression upon the faces of the passengers in the automobile to the left. Evidently they recognized a good thing when they saw it and that is why they are giving the "twice over" to the cars behind. Possibly it would not have been necessary to label the other two cars, but then again there is nothing like driving home the point of the story.

In the judges' stand those of our readers who are automobile racing fans, will recognize the features of such prominent drivers as Teddy Tetzlaff, Hughie Hughes, Bill Endicott, Neil Whalen, Earl Cooper, Harvey Herrick and Joe Nikrent and others, including the famous transcontinental pathfinder, A. L. Westgard. A copy of our new and handsomely illustrated folder, "Words of Wisdom From the Speed Kings of Motor-dom," identifies all of these drivers and many more, who do not appear in the stand. All of these judges appear to appreciate the situation. They know what can be accomplished and what can be avoided in the way of automobile lubrication with Dixon's Graphite Automobile Lubricants, for all of them use and heartily recommend Dixon's.

Credit for this clever display is due to the Boston office of the Dixon Company.

IN GRAPHITE for January we said: "The hand of destiny shapes our ends, but in sharpening pencils there is nothing that helps so much as the straight grained Florida cedar in Dixon's American Graphite Pencils."

Now we are asked if the hand of destiny that shapes our ends is that of a pretty manicure girl?—"No, sir!"

SLIDING FRICTION

We are told that the resistance which a body meets with from the surface on which it moves is called friction. It is called sliding friction when one body slides on another; for instance, a sleigh is pulled along on ice—the friction between the runners of the sleigh and the ice is sliding friction.

We are told that a planer, whose bed-plate required the force of eight men to slide it when lubricated with the best of oil and grease, was easily shifted with one hand when Dixon's Flake Graphite was applied.

It is said to be rolling friction when one body is rolling on another so that new surfaces continually are coming into contact; for instance, when a wagon is pulled along a road, the friction between the wheels and the road is rolling friction, but the friction between the wheels and their axles is sliding friction. For sliding or rolling friction there is no material so useful as Dixon's Pure Flake Graphite. The flakes are tough yet of marvelous thinness. When carried by the oil or grease they are deposited on the bearing surfaces where they form a veneer-like coating of pure graphite. This coating prevents a metal-to-metal contact and makes possible the use of less oil or grease.

FROM A CURRENT FARM PAPER

It was Thoreau who said: "If you can tell a better story, paint a better picture or make a better mouse-trap than anybody else, though you live in the middle of the wilderness, people will make a beaten pathway to your door."

Dear old Ralph Elbert Thoreau, the rare monologist of Roycroft Pond, how true is his philosophy. So it was the author of "The Message to Self Reliance" who said this, was it? Well, as Henry D. Emerson, of the Emerson News Bureau, says, "Next to the originator of a good sentence is the first quoter of it."—*Batten's Wedge*.

Though credit really belongs to Elbert Hubbard, we nevertheless appreciate the delicate solution of this much debated question as offered by the editor of the *Wedge*.

INCREASING SALES

By WM. P. F. AYER, General Manager of Sales,
THE WALWORTH MFG. CO., BOSTON

Now that resolutions have been made for the coming year, we naturally turn to the ever-present and most-important topic—"How shall more business be secured? How shall the year 1914 be made greater in sales than the year just past?"

If the desired result is to be obtained two of the most important fundamental causes which tend to an increase in business, efficiency and good salesmanship, must be kept ever at the front. There are many other reasons for continuous growth in sales, but the two above are the most important.

The first of these is, without doubt, the more far reaching. To obtain efficiency one must have quick and accurate work, and it is necessary that all, from the top to the bottom, should work together and for the common cause. A letter not answered today, because it can be tomorrow; a shipment deferred, that by a little extra effort could have gone forward today; an invoice delayed; a telephone call not answered promptly; a claim allowed to rest without early attention,—all these, and many other details, if carefully and promptly attended to, constitute efficiency. As business is done in these days of rapid action, one cannot afford to lack in any of these essentials. If not observed, they constitute resistance to the smooth flow of trade, and as human nature usually follows the line of least resistance, business drifts to other channels where such difficulties do not exist.

The medium between the buyer and seller—the salesman—is, of course, a most important factor in the maintaining of present business, and in bringing about an increase in sales. There are two classes of salesmen—those who are inside, and to whom the customer comes; and those whose duties carry them away from headquarters, "out on the road."

We are prone to consider the latter class as the more important. Yet, the truly successful business requires the same high qualifications from both the "inside" and the "outside" salesmen.

In this short space it is possible to mention only the most important requirements of salesmanship. First: A salesman must be a gentleman. He should possess the faculty of "sizing" up his customer, and have sufficient tact to know just when the psychological moment arrives to either close the trade or abandon the effort. Many a good prospect has been killed by lack of tact on the part of the salesman. He should have a genial bearing. A pleasant smile and cheery word has many times secured business, where the opposite would have failed. Human nature likes sunshine, and with it shows the best results.

With the above fundamentals, a salesman must, of course, have a thorough knowledge of the goods he is selling, as well as a reasonable one of his competitors'. He must have the ability to put before a prospective customer the merits of his wares. Loyalty must be thoroughly instilled into his mind. If your salesman does not believe implicitly in your ability to make good, how can you expect your customers to do so?

If careful attention is given to these two prime factors in marketing your goods, and all these details brought to the highest point of perfection,—the business of 1914, when reviewed, should be to your satisfaction.

—*The Walworth Log.*

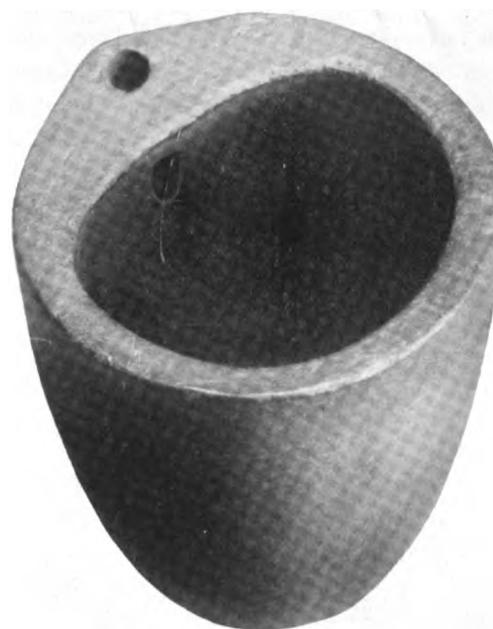
SAMUEL E. DARLING

To record the death of Samuel E. Darling which occurred on January 17, is to mark the passing of one dearly beloved by a greater host of friends than it is the lot of most men to form, during even a life-time such as his of over ninety years.

In his earlier business career, Mr. Darling was a banker associated with the old time banking house of Duncan, Sherman & Company of New York, and later on his own account, when he amassed what for those times was a comfortable fortune. He occupied a fine home at Closter, N. J., where he was well known and loved for his activity in church and social life. It was one of Mr. Darling's greatest pleasures to be numbered among the veterans of the Seventh Regiment N. G. N. Y.

For a long time Mr. Darling was collector of Internal Revenues in Jersey City, and in 1887 he accepted the position of cashier with the Joseph Dixon Crucible Company. This position he retained until December 1905, at which time he resigned preferring a life of quiet, to which his age and long service entitled him. Up to the present time he always had a message for his old associates, who on his ninetieth birthday were proud to honor him with flowers and gifts.

Mr. Darling was an old time gentleman in every sense of the word, always actuated by the highest principles of moral and spiritual motives. His whole life was a benediction, and those who were honored with his acquaintance and friendship will remember him with reverence.



THE above illustration will show a new crucible which has been evolved by Henry Weisbrodt, an employe of the Joseph Dixon Crucible Company, to be used by melters of precious metals. It has been designed to do away with skimming, and also the possible chance of charcoal and molten fluxes getting into the ingot or casting.

This crucible has a bridge at the top, which, on pouring the metal, holds back the charcoal and foreign matter, and so delivers clean metal.

This new design does not in any way reduce the holding capacity of the crucible, and the metal can be stirred satisfactorily as in an regular crucible.

GOVERNMENT CONTROL OF WAGES, PRICES OR COMMODITIES

Roger W. Babson was so grossly misquoted in certain reports of his address of December 13, before the Twentieth Century Club of Boston, that his Bureau thinks his friends should be informed as to his real position. Briefly, this is as follows:

Mr. Babson is thoroughly opposed to the paternal legislation of today; he believes that government control or interference with wages, prices, or commodities is sure to result in disaster; and that neither the working classes nor consumers can gain anything in the long run by attempting to interfere with natural economic laws, such as the laws of supply and demand, reward and punishment. If so, the legislation now being enacted will not succeed in "distributing prosperity"—as the politicians use the term. These are the points which Mr. Babson emphasizes and are the only things that interest him at the moment.

Originally the vested interests owned individuals, land and all property. Then the people were slaves under a feudal system. The first great movement involved the breaking away from slavery; the second involved the breaking up of the feudal system; the third involved securing for each man a vote when the right to rule was no longer permitted to pass by inheritance; and now the fourth is in progress, namely, an attempt on the part of the people to get a greater proportion of the tools.

To use Mr. Babson's own words, "the attempt on the part of the people to get a greater proportion of the tools will develop only slowly. This is best illustrated by the history of the last forty years. It will be remembered that during the 80's there was a great cry against the railroads and during that 'granger' period investors thought that the people were going to take away their property then and that capital would never again come to its own. A depression came, however, which brought farmers and labor to their senses and capital was again placed in control of the situation. Under the leadership of Mark Hanna followed the greatest reign that capital has ever enjoyed. Of course capital abused its power, as did the people twenty years previous; hence capital was again dethroned, and now the people are again having their turn at ruling. These ups and downs will continue. The next great movement will be in favor of the return of capital to power; after which, twenty years hence, the people will again return to power. (I say 'twenty years' because this is usually the mark of a generation and these cycles occur about once a generation.)

"The people are not ruling today for 'keeps'; for, as above shown, capital will surely many times again come back to power. On the other hand, we must realize that the great tidal movement over the centuries is in favor of the people and that every time the people come into power, they will have a little more power; and that every time capital comes into power, it will have a little less power. Therefore, I say that legislation coming under this first group is in a way normal and, although we do not like it, we may as well make up our minds to it, prepare for it and be happy."

THREE YEARS AGO no less than 230 kinds of lead pencils were purchased for the use of government departments. This has now been reduced to eleven.

BOSTON is said to be a great pie eating place, but we are told that one pie company alone in New York City have an output of seven and one half million pies a year—doing approximately one half of the pie business of New York and forty per cent. of that of Philadelphia. It is the largest pie baking concern in the world.



**Says
Old Jerry:**

"I'm for oil on
troubled waters,
but give me

**DIXON'S
Flake
GRAPHITE**

on troubled
bearings. 'It's
all in the flakes.'"

Made in Jersey City, N. J., by the

**Joseph Dixon
Crucible Company**

Established 1827

COMPETITION

There were once two cats of Kilkenny,
Each thought there was one cat too many,
So they scratched and they bit,
They fought and they spit,
'Till, excepting their nails
And the tips of their tails,
Instead of two cats there weren't any.



THE TEETH OF FRICTION

It is human nature, we are told, to doubt. From time to time Dixon advertisements contain the statement that "microscopic elevations and depressions exist in even the most highly polished metal surfaces," and while probably no one openly doubts this statement, it is sometimes hinted that we have exercised our advertising license. This despite the fact that the Dixon Company maintains a most rigid censorship over its printed words.

Evidence of the truth, in this particular instance, however, is printed each day, not once or twice in one or two places, but *millions* of times in thousands of cities all over the world. And this evidence is obtained from the surface of the ordinary halftone printing plate which, though smooth as velvet, contains from five thousand to as many as one hundred thousand minute projections to the square inch, upon which depends the faithful portrayal and reproduction of photographs, paintings, wash drawings, etc. So tiny are these metallic projections that even the most delicate sense of touch fails to find them and they are, of course, invisible to the naked eye.

In a bearing and journal the teeth of friction are different only in that they are more irregular. Is it any wonder that the incessant locking of such surfaces causes an almost constant wear? Wear such as this may often go on for years without once giving a *fair* warning to the engineer. That is the tragic part of a good lubricant—oil or grease, that apparently makes good and almost, but not quite, stops the insidious biting and scratching. It is like the man whose brilliance, keen knowledge and evident power is marred by a fatal weakness—a fault which shows on the surface but rarely, but which is his constant companion.

Were it possible to obtain *even* pressure in a bearing, there is hardly a doubt but that all of the many excellent greases now upon the market would fulfill their purpose. But "even pressure," like "perpetual motion," is a thing dreamed of and every once in a while claimed as found by some expert. Varying loads and varying speed are but the common causes of uneven pressure and by no means the only ones. When we begin to consider such slight things as the imperfect alignment of a shaft or bearing to a small fractional part of an inch—and how many possess absolutely true adjustment?—why, then are we arriving at the real reason why "even pressure" is a thing

with rainbow hues. "Touching the high spots" is therefore something for which allowance must be made, and it is just here that the man who depends only upon an oil or a plain grease film misses fire.

The oil or plain grease film is, because of its liquid or semi-liquid nature, subject to every influence which makes for uneven pressure, and while such things as a variance in speed or load may give immediate and vociferous protest to the engineer, it is a fact that the minor causes do not advertise themselves, but like a certain little dreaded insect, "gits thar just the same."

MORAL:—Brushing the teeth of friction with oil or plain grease is an excellent habit, but if you would avoid trouble, don't forget to have them filled with Dixon's Flake Graphite.

MOTORWOCKY

'Twas metzger, and the cartercar
Did ford and fiat in the coles;
All alco was the kisselcar,
And the white winton olds.

Speedwell the apperson, my son,
The marmon big, the pope adroit!
Oh, moon the michigan, and shun
The peerless paigedetroit!

He took his hupmobile in hand,
Long time the premier he sought;
So packard he, neath the K. R. I. T.,
And E. M. F.'d in thought.

And while in regal thought he stood,
The cadillac, with haynes aflame,
Came hudson through the simplex wood,
And garford as it came.

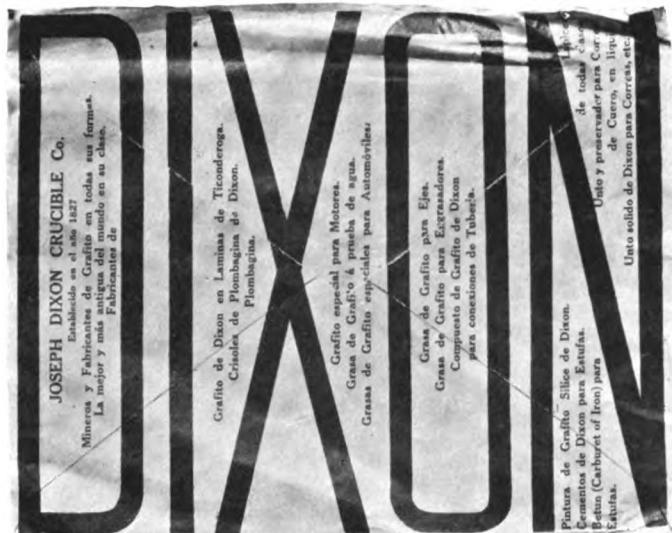
Oakland he slew, and franklin too,
The national went overland;
The jackson's squeal, "locomobile!"
Piercearrowing in his hand!

And hast thou Thomas Marion?
Moline on me, my buick boy!
Oh, reo day! Oh Chalmers!—say,
He flanders in his joy!

'Twas mercer, and the studebake
Did lozier in the matheson;
All stevensduryea mitchell make,
And the stearns henderson.

—GELETT BURGESS in *Life*.

THE LUBRICATING properties of graphite are well known and little appreciated. Shackle bolts and universal joint pins are rendered smoother in action and less liable to wear if they be dismantled occasionally, thoroughly cleaned and dried, and have a little graphite well rubbed into their surfaces before being refitted. It is, of course, a very old workshop "tip" indeed to rub graphite well into the bearing surfaces when fitting a new bush or bearing.—*New York American*.



MR. EICHLER'S DIXON ENVELOPE

The reproduction above is of the reverse side of an envelope used by Mr. A. J. Eichler, representative of the Dixon Company for the republic of Argentine and neighboring territory. The original envelope was printed in two colors, the large and striking letters forming the word Dixon in black, and the smaller words in between and descriptive of the various Dixon products, in red.

It is quite evident from the appearance of this envelope that Mr. Eichler does not intend that those with whom he corresponds shall lose sight of the fact that he represents the Dixon Company.

EFFECT OF BOILER GRAPHITE

By C. T. R.

Everyone knows that to some extent all waters used for feeding steam boilers contain impurities, either in suspension or in solution. Everyone knows, too, just what happens when the impurities collect on the boiler shell and tubes in the form of scale or soft mud, in sufficient quantities to affect the steaming properties or to seriously imperil the safety of the boiler. The explosions about which we read so frequently are nearly always caused by the failure of a scale-clogged tube, or a scale-crusted plate that has warped to the point of rupture, or to an unsuspected crack in the shell that had been concealed by scale. The fight against scale is being stubbornly waged.

EFFECTS OF SCALE

The effect of scale in a boiler ordinarily is to reduce both its steam-generating capacity and its economy, since scale is not a good conductor of heat and, therefore, diminishes the transmission of heat through the boiler plates and tubes. Scale is also highly dangerous, for whenever it accumulates to any great extent at a part of the shell exposed to the flame or to very hot gases, it prevents the cooling action of the water from protecting the metal against burning. The plates frequently become overheated and weaken so as to "bag," crack and cause an explosion.

SCALE REMOVAL

Since nothing has been found to absolutely prevent the formation of scale, the only logical thing is to employ some means to easily and safely remove the scale that does form. Flake graphite has been used for this purpose for many years,

and with gratifying results. The action of graphite is not chemical; it does not dissolve the scale, nor does it attack the metal; neither is it affected by acids in the water or by the heat generated in the boiler. The particles of graphite simply work into the minute cracks existing in the old, hard scale and gradually penetrate between the scale and the metal. The scale thus loosened may be rapped off or removed otherwise without trouble.

It must be understood that if the scale is very hard and thick it may require as long as three or four months for the graphite to loosen it, but once removed, scale can never adhere firmly to the metal again as long as the graphite treatment is continued. Graphite also becomes thoroughly intermixed with new scale as it forms, rendering it soft and crumbly. In short, graphite makes boiler cleaning positive and easy.

Its use minimizes the time and power lost while cleaning; increases efficiency of heating surfaces; reduces fuel consumption; minimizes repairs; improves operation of feed pumps and water meter, and prolongs the life of boilers.

The action of graphite is purely mechanical. It may be used in any feed water and in any type of boiler. It will not evaporate or dissolve. It cannot cause "foaming," nor under normal conditions can it pass from the boiler with the steam and thereby render it unfit for industrial purposes; for this reason, it finds special favor in ice plants, laundries, breweries, sugar refineries, canneries, etc.

FORMS OF GRAPHITE

It is generally conceded that graphite is a satisfactory agency for the successful removal and prevention of boiler scale, but careful consideration should be given the grade of graphite best adapted for the purpose. Graphite as found the world over, is divided into two general classes only—flake or crystalline, and amorphous. Amorphous graphite is valuable for certain purposes, such as foundry facings, stove polish, etc., where its properties of balling up or sticking together in masses is not objectionable. It is a fact, however, that this form of graphite, due to the physical characteristics of the particles, to a certain extent forms into pasty or mud-like masses in the presence of water in a boiler, and settles on the plates and tubes. On the other hand, experience has shown that the finely pulverized thin, flake variety of graphite will be distributed evenly on the surfaces of the shells and tubes and become more permanently attached to the metal than the amorphous graphite. This means that, pound for pound, flake graphite will give at least twice the service of the other. In other words, every particle of finely pulverized, thin, flake graphite is a scale reducing particle.

Both amorphous and flake graphite are employed, but investigation shows that those who manufacture and sell both grades, recommend the finely pulverized material in preference to the amorphous, although the margin of profit is approximately the same on both.—*The Power House*.

AN OIL for use in exposed places in the winter time is produced by mixing graphite with cylinder oil until the mass assumes a pasty consistency, and then adding enough kerosene to reduce the mixture to a freely flowing liquid. It is claimed that the oil thus produced will not stiffen in an atmosphere at the temperature of fourteen degrees below zero.

—*National Engineer*.



PAINT FOR SMOKESTACKS

Dixon's Silica-Graphite Paint Lasts the Longest

The Hotel Jackson, of which mine host, J. M. Gormley, is the popular proprietor, situated on Virginia Avenue, is one of the well known hotels at Atlantic City, N. J. It is one of the many hotels which use Dixon's Silica-Graphite Paint for metal work and we are much pleased to be permitted to quote the following testimonial in the hope that others will find it to their interest to use it.

HOTEL JACKSON

Virginia Avenue, ATLANTIC CITY, N. J.

Joseph Dixon Crucible Company,

Jersey City, N. J.

DEAR SIRS:—Your letter of the 6th at hand and we take pleasure in stating that we have used Dixon's Silica-Graphite Paint, Black, on the smokestacks of this hotel for many years, and that the same has given perfect satisfaction.

Yours truly,

(Signed) J. M. GORMLEY.

SOMETHING TO CONSIDER IN THE DIVISION BETWEEN CAPITAL AND LABOR

Probably we have all read and are more or less familiar with the Ford Motor Company's plan to cut a \$10,000,000 melon annually for its employees.

Mr. Ford believes that the division of earnings between capital and labor is not fair and that labor is entitled to a greater share. Desiring to express that belief in some practical way, the Ford Company has adopted a new plan.

It means in substance that no man over twenty-two years of age will receive less than \$5.00 for eight hours' work. Others will be compensated in relation to their value, using the \$5.00 per day as the minimum.

Whatever future plans may be made are dependent upon conditions, but the Ford Motor Company hope to make a further distribution at the end of the year, after having laid aside proper amounts for the dividends, extension and the construction of assembly plants throughout the country.

The reduction of the working hours to eight hours per day, of course made an opening for the employment of many additional men, and here is where we want to call attention to the anxiety of men to get work, if work is possible.

On Monday, January 5, after the Ford Company's plans had been made known, ten thousand anxious, determined men, some ragged and unkempt, others seemingly prosperous, beginning at three o'clock in the morning, fought for places in a line that stretched out from the employment window at the Ford Motor Company in Highland Park, for many blocks from the company's factory.

At six o'clock in the morning the crowd had become a shoving, jostling, mirthless mob of men, each with the sole

aim to reach the employment window before all of the 4,000 jobs created by the Ford Company's change from a two-shift nine-hour day to a three-shift eight-hour day, were apportioned out.

FOR THE GIRLS WHO ARE OVER THIRTY

A newspaper writer asks:

"Who is thirty? Where is thirty? What is the mystery that somehow surrounds this age?

"'Wanted, a woman under thirty.' That is a form of want ad often inserted in the columns advertising for cloak models, social secretaries, or general housework servants of the type that are in search of a good home and plenty of work rather than lavish wages.

"Napoleon, just before he married Josephine—and he was twenty-six or twenty-seven at that time—proposed to a woman who acknowledged herself old enough to be his mother. Therefore she must have been nearer forty than thirty.

"'A woman's age doesn't interest me,' said Napoleon, 'if she doesn't look over thirty.'

"'A woman is never dangerous until she is thirty,' says a sophisticated judge of the fair sex. He does not explain just what he means. But many a woman of twenty-nine has stepped gayly into thirty with his verdict in view. It was well worth losing another year of youth in order to see what it felt like to be dangerous.

"In the old days an unmarried woman was called an old maid by the time she was twenty-three or twenty-four. Today thirty seems to be the boundary between young womanhood and old maidhood." Probably we had better stop right here unless we add, "as a matter of fact, most women are more attractive at thirty than they ever have been before. There is a certain type of beauty which develops to the full when a woman is eighteen or twenty, and is faded almost past recognition by the time she is thirty. But most women are improved in looks by years—up to a certain point.

"Intellectually, surely, a woman is far more interesting at thirty than at twenty. Unless she has been overworked or overburdened her mind has had a chance to develop and expand, her point of view has had a chance to grow and become staple, and her philosophy of life, whatever it may be, has had a chance to formulate into something tangible."

HOW THE PENCIL DEVELOPED

First came a hollowed reed, with a sharpened point, to suck up liquid colors with which were traced figures on papyrus sheets. Among the variants was a short rod with a blunt metal point intended to cut lines in waxen tablets. This was known as the stylus and it is said that the Italian word stiletto is derived from that word. When two fellows had a row they used the stylus as a weapon.

From the stylus and the hollow reed there developed the "plummet," made of metallic lead. Then came the piece of grooved wood with the piece of shaped graphite glued therein. Later came the more perfected pencil with "lead" composed of powdered graphite and clay compressed into shape and encased in wood.

At last came the perfected Dixon American Graphite Pencil with which we are all familiar.

THE MAXIMS OF RUSSELL SAGE

Without doubt there are many readers of GRAPHITE who still remember Russell Sage, and those who do not, may be interested in reading some of his maxims:

Any man can earn a dollar, but it takes a wise man to use it.

I saved the first dollar I ever earned, and from that hour I have never been in debt to a human being for a cent that was not ready when due.

Society is to blame for many wasted lives.

Those who live for pleasure alone do no good to themselves or to others.

There is no such thing as the money curse; a good man cannot have too much money.

Fifty cents is enough for a straw hat; it will last two seasons.

It is a surprising fact that many men endure unwarranted expenditures for no other reason than to excite the envy of their neighbors.

A boy who knows bargains in socks will become a man who knows bargains in stocks.

When you have made your fortune it is time enough to think about spending it.

The tender care of a good wife is the finest thing in the world.

The longer a man lives the more mistakes he may be counted on to make.

Clubs are only places for idle old men and wasteful young ones.

Real charity is distributed without the blare of trumpets.

I think the vacation habit is the outgrowth of abnormal or distorted business methods. I fail to see anything legitimate in it.

PORTEAGE LA PRAIRIE, MAN., Dec. 11, 1913.

Joseph Dixon Crucible Company,

Jersey City, N. J.

GENTLEMEN:—In your booklet "Lubricating the Motor," you recommend Graphitoleo for the hubs of motorcycles. I am using Dixon Cup Grease No. 3 which is certainly fine, at least for this weather. But as you recommend Graphitoleo I am anxious to see what it is like and as I cannot get it here I am taking the liberty of imposing upon you for a sample.

Dixon's Motor Chain Compound is a wonderful lubricant for the purpose. Have run my R. S. twin motorcycle over 6,000 miles on two treatments with no occasion to set the wheel back. There seems to be no wear at all. Of course, the chain runs nice and clear of any oil, always presenting a clean bright appearance and holding no dust. In treating I use a double boiler so that the temperature can never exceed the boiling point of water, and heat and cool three times so as to make sure that all air lodged in the chain is driven out.

Yours very truly,

R. J. HILL.

WHY WORRY

"Dey had chicken to eat and polonaise dressin' on de salad an"—

"But Liza," said her mistress, "you haven't told us anything about the groom."

"Bless yu heart, Missus, dat triflin', good-for-nothin' nigger never did show up no how."

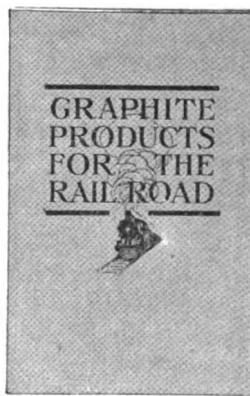


ALL ABOARD

for Chicago, "the railway center of America." And to prove it, the Windy City has established a Railway Supply Permanent Exhibit on the 12th floor of the Karpen Building, 900-910 S. Michigan Boulevard.

Space 51 is devoted to an exhibition of Dixon's Graphite Products for the railroad, and the Dixon Company extends to all interested, and especially to railroad men, a cordial invitation to get acquainted with the many good graphite products on display.

If You
Can't
Go,
Write
for Book-
let No.
190-R. R.



GRAPHTONE



VOL. XVI.

MARCH, 1914.

No. 3.

Issued in the interest of Dixon's Graphite Productions, and for the purpose of establishing a better understanding in regard to the different forms of Graphite and their respective uses.

HENRY FORD'S SANITY

From Babson's Report, January 20, 1914

While letters are still coming to me regarding the impossibility of there ever being any such distribution of wealth as I referred to in my "Twentieth Century Club" speech, out comes Mr. Henry Ford with an announcement of his intention of making a practical application of this principle! Although I realize that it is at the risk of incurring the ill will of many clients, I can not refrain from suggesting that Mr. Ford's underlying principle is economically sound. We may not agree as to all the details, yet we must recognize that he is one of the very few men of large wealth who has the courage to break away from his rich associates. He has grasped the lessons of history which we have been continually emphasizing in these Barometer Letters.

Mr. Ford, as the practical owner of the Ford Motor Company, has made a large amount of money and has a very profitable business at the present time. At the beginning of this year there were four possible courses open for him to follow, viz.:

1. He could continue to accumulate millions to bequeath to his family. This, for some inconceivable reason, would be considered the proper thing to do.

2. He could capitalize his profits, sell a huge issue of preferred stock to the public and retire from business. This, from a selfish point of view, would be the easy thing to do.

3. He could continue to buy his labor in the cheapest market and then each year give huge sums to charities. This, according to present standards, would be the popular thing to do.

4. He could consider his workmen as his family and distribute property directly to them year by year and, at the same time, train them to take care of it. This, to my mind, would be the Christian thing to do.

Much to the dislike of his business friends and operators of local, state and national charities, and to the possible displeasure of some relatives, Henry Ford has fearlessly chosen this fourth course. Moreover, both his family and his employees will be much better off by this radical and unpopular step. If it were followed by more men of wealth, their families also would be much better off; the politicians could be put out of business; all legitimate investments would be on a

much firmer basis; and the X-Y line of our composite plot would shoot upward at a pace never dreamed of before.

Of course, our problems will not be solved simply through giving people money. The masses can be helped in the long run only through some system of continuation schools in vocational training which will develop producers as well as consumers, and a disposition to serve instead of only to acquire. Such a system, however, cannot be under political control or paid for out of the ordinary tax levy; but must come through the distribution of large fortunes, either voluntarily, as in the case of Mr. Ford, or involuntarily by graduated inheritance taxes.

Therefore, whether we smile or frown at Mr. Ford's so-called charity, I advise that we all watch the experiment, and if the opportunity offers, do likewise. Our problems will not be solved either by paternal legislation or charitable "foundations;" but only by each one of us looking upon our own employees as our brothers and heirs.—ROGER W. BABSON.

TEACHING THE SAILORS

Uncle Sam is beginning to have the sailors in our Navy go to school. For the first time in the history of the service the officers have been called upon to impart the knowledge they have gathered at Annapolis to the men before the mast, and some surprising results have been obtained.

There have been a number of amusing incidents on the battleship North Dakota. There are a number of Filipinos who have been anxious to learn and who have been given much misinformation by their fellow sailors. Commander Jackson asked one class to prepare compositions upon George Washington. One of the sailors who had sought outside counsel from a coal passer who has a sense of humor, produced the following:

Georg Wassingham was sore because Ammerical persons is not free. He sale to England on North Dakota ship and say to king, "I iexpress declaracion of indypendens for American persons." King say nothing doin and Mr. Wassingham tell admiral Dewey to shoot turret guns. Bime-by, king say he will not rule Ammerical persons again. "Let George do it," say king, and Ammerical persons is free.

A WOMAN cares a great deal about her appearance, and some women (especially drawing teachers) are wise enough to care a great deal about the appearance of their (pupils') work. Dixon's Drawing Pencils *do* make a difference. Doesn't your intuition suggest that you should write for booklet No. 190-J? We thought so.

ESTABLISHED 1827



INCORPORATED 1868



JOSEPH DIXON CRUCIBLE CO.

JERSEY CITY, N. J., U. S. A.

**Miners, Importers and Manufacturers of Graphite,
Plumbago, Black Lead.**

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 SOUTH AMERICAN AGENT,

Alfredo J. Eichler, 666 Calle Cangallo, Buenos Aires, Argentine.
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For all Products Except Dixon's American Graphite Pencils
 Croft & Prentiss, Room 424 Lonja Building, Havana.

For Dixon's American Graphite Pencils.
 Harvey & Harvey, Empedrado 30, Havana.

GRAPHITE

March, 1914.

commercial life of the country and are not included in *Bradstreet's* failure data. It is hardly necessary to add that failures of bucketshops are not and never have been included in *Bradstreet's* statistics. On the other hand, it should be clearly borne in mind that these statistics do cover and include all suspensions of banks and other strictly financial institutions, even if these suspensions prove only temporary. For these and other reasons, comparisons of the commercial failure reports made up by *Bradstreet's* with those issued by other concerns cannot be properly made. Failures merely to succeed, without loss to creditors, are not embraced in our data, because these are devoted to cases of insolvency alone.

—*Bradstreet's*.

AMERICAN MANUFACTURERS EXPORT ASSOCIATION "TO FOSTER FOREIGN TRADE"

This organization is one that should appeal to all manufacturers who are in any way interested in foreign business. It should also appeal to those who are not interested, for the reason that the day will shortly come when every manufacturer of any size or account must look for foreign trade if his business is to grow to that extent that every manufacturer should desire.

The Association, as its name implies, devotes its energies exclusively to foreign trade matters. It keeps in the closest possible touch with the United States Department of Commerce, the State Department and other departments, and backed up as the Association is by a large number of members, any recommendations made by the Association are certain to receive the most favorable consideration possible. The Association works hand in hand, so to speak, with the Bureau of Foreign and Domestic Commerce.

And the admirable missionary work which has been and is constantly being done for the Association in South America, particularly by its directors and members who visit there, is of especial value to its members.

The following is a paragraph from the speech of Mr. Farrell. The speech in full appears on page 89 of the Annual Report:

"The importance of this Association can hardly be overestimated as a factor in the economic development of the country. It deals with the multitudinous detail incident to exports and discusses matters of vital interest to American export trade. Dissemination of information, interchange of ideas, and co-operation tend to stimulate an intercourse which is of material, as well as educational, value to its members, and place our manufacturing industries upon a more intelligent basis to meet the commerce of the world."

The following is from the Hon. Wm. G. Redfield, United States Secretary of Commerce:

"I congratulate the Association upon the splendid progress made during the year just closed. The Department of Commerce will do all it can in furtherance of the great work your Association has in hand."

"SUCCESS," said a prominent educator, "lies in multiplying your individuality in others." The surest way for a drawing teacher to multiply her ability is to distribute Dixon's Drawing Pencils among her pupils. Have you written for a copy of booklet No. 190-J? No! Well, now's a good time.

WHAT A BUSINESS FAILURE IS

Bradstreet's definition of a business failure is that it must involve some loss to creditors of individuals, firms or corporations engaged in ordinary commercial operations. Under this classification, failures of professional men, such as physicians, lawyers and actors, as well as stockbrokers and real estate dealers, also old bankruptcies passing through the United States courts, have no place. Most or all of these may be, in fact generally are, dissociated from the recognized



WINDOW DISPLAY OF ADAMS, CUSHING & FOSTER

The accompanying illustration shows an unusually interesting display of Dixon's Anglo-Saxon Pencils in the large show window of Adams, Cushing & Foster, New England's prominent stationers.

The decorations were in charge of their window dresser, Mr. E. W. Hutchinson. Considerable taste was shown in the placing of the various colors and the large picture of the Dixon factory, where Anglo-Saxon Pencils are made, makes a most appropriate back ground.

This display is one of several window displays of Anglo-Saxon pencils in New England, following out the work of the Boston office in introducing this attractive and popular pencil.

BLAME THE AUTOMOBILE

We read in the daily papers that ex-governor Frank Brown of Maryland, known as the "Farmer Governor," blames the automobile for depressed business conditions here in the East. According to the newspapers, he claims that "the automobile" has taken the farmer away from his fields and therefore diminished his production of foods. When the farmer saw the banker and the merchant riding about in their cars he felt that he could get a lot of pleasure out of doing likewise. Therefore he proceeded to invest in a machine himself, in many cases putting a mortgage on his place to do so.

Now instead of quitting work at sundown, as has been the custom of the farmer, he leaves off at three or four o'clock in the afternoon, in order to give his family a joy ride and instead of getting up in the morning to milk the cows, he lies abed and leaves it to the "hired man" to do all such work. The result is that there is much less farm products raised and the prices have soared.

OIL ON WAVES

Various explanations have been offered for the action of oil on the ocean waves during a storm, but beyond all speculation is the lesson brought home today of its value to every mariner and of the necessity of storing it in every vessel.

Its methods of employment are simplicity itself, and in an emergency almost any oil will give good results, though it is well to remember that animal and vegetable oils are the best, and the mineral oils, relatively speaking, the least effective.

However, the moral of it all, for seamen of every class and condition, is: Do not forget the proved good effects of pouring oil on troubled waters.

An equally good little sermon might be preached substituting the word "graphite" for "oil," and "machinery bearings" for the "ocean waves." Pure and unadulterated graphites have lubricating value, but for the very best results there is nothing to equal the thin, tough Ticonderoga flake graphite.

No "various explanations" need to be offered for the action of the Ticonderoga flake graphite. The minute, thin flakes build up all of the microscopical irregularities, forming a veneer-like coating of marvelous smoothness and endurance—a coating that prevents metal-to-metal contact, and a coating that makes possible the use even of inferior oil or grease lubricants, and a coating which means at all times economy and smooth running.

A DRAWING teacher was once asked why she preferred to have her pupils use Dixon's Drawing Pencils. "Because" she said, "I am just selfish enough to know that in a measure the work my pupils turn out decides with the board my ability as a drawing teacher." This young woman knew when to be selfish—she became so after we had sent her a copy of booklet No. 190-J. Yes, a postal will do. Write it now.

METHOD OF RECOVERING GRAPHITE FROM OLD CRUCIBLES

A method of recovering graphite from old graphite crucibles has been patented by Albert Teichmann of Zeitz, Germany (U. S. Patent 1,080,085, December 2, 1913). He describes his process in the following manner:

"The valuable graphite contained in worn out broken crucibles has up to now gone to waste, because no practical and economical process to recover it was known. This useful effect may now be attained by the method which forms the subject matter of the present invention and is carried out as follows:

The worn out crucibles are broken into pieces having the size of, perhaps, a fist, and these pieces are subjected from four to twelve hours, to the action of sulphuric, muriatic or nitric acid, or any other equivalent acid as may be best suited to the composition of matter of which the respective crucibles were made, the object of this treatment being to break the union between the graphite, which is one of the components of that composition of matter and the other components of the same. The treated pieces are heated to red heat in a suitable furnace, kiln, retort, or the like, in order to evaporate the acid and to render the pieces rather brittle and friable. Thereafter the pieces are passed between the rollers of a crushing mill for the purpose of loosening the slack, which then is separated from the crushed pieces by a sieve or the like.

It will be understood that where the word "slack" is used in this specification and in the claims comprised herein, that I mean to include in said word substances ordinarily used in the manufacture of graphite crucibles, such as binding materials which are other than graphite. The remaining pieces are subjected repeatedly and for as long a time as possible to the action of a grinding mill and the product obtained by each grinding operation is sieved, this procedure being carried through in such a manner that a plurality of sizes of grain and of graphite dust, for instance six sizes of grain and two sorts of dust, are obtained.

It is of great importance that the rollers of the grinding mill rotate with absolutely the same speed—even the very small difference which is brought about by one tooth more or less of the cog wheels, or by unusual spaces between the teeth of the cog wheels impairs the quality of the product to a remarkable degree. It is therefore preferable either to employ cog wheels of exactly the same number of teeth, or to impart power only to one of the rollers and to let this roller rotate the other one merely by the friction produced by the grinding action."

(At the present price of graphite, this process would hardly appear economical, particularly when it is taken into consideration that the product would be of an inferior grade of graphite. The treatment of the crucibles with sulphuric acid would seem an expensive and laborious process for such a material as old crucibles, and the inferiority and cheapness of the resulting product.—Editor.)—*Brass World*.

"IT IS one of the pleasures of editing," writes the editor of a well known Southern publication, "to use a pencil having a strong, uniform, smooth lead, which, after fifteen years of constant use, I have found to be one of the chief characteristics of Dixon's Pencils."

WHY MEN FAILED IN 1913

The old proverb as to a man, largely speaking, being the architect of his own fortunes, has been amply borne out by *Bradstreet's* statistics of the causes of failure, now in their twenty-fourth year of compilation. Eight leading causes have been grouped as proceeding from the individuals themselves, while three reflect the influence of happenings beyond their control. These causes class as follows:

A.—Due to faults of those failing.

Incompetence (irrespective of other causes).

Inexperience (without other incompetence).

Lack of capital.

Unwise credits.

Speculation (outside regular business).

Neglect of business (due to doubtful habits).

Personal extravagance.

Fraudulent disposition of property.

B.—Not due to faults of those failing.

Specific conditions (disaster, etc).

Failure of others (of apparently solvent debtors).

Competition.

In 1913 80.5 per cent.—almost exactly four-fifths of the failures, in fact—were attributed to the shortcomings of those who failed, while 19.5 per cent. were classed under causes apparently beyond their control.—*Bradstreet's*.

FINDS GOOD THINGS IN "GRAPHITE"

"I compliment you," writes the professor of *Mechanical Engineering*, "on the considerable amount of instructive and interesting material contained in GRAPHITE. I found myself spending several hours recently looking over the good things."

The professor is connected with the scientific school in one of our most prominent universities, and the school itself is known to all scientific and mechanical men the world over.

Dixon's selected flake graphite rubbed into your tire shoes will increase the life of your tubes and kill the blow-out bug. It is harmless to rubber. Keeps tubes cool, soft and pliable.

DIXON'S Graphite Automobile Lubricants

a special lubricant for every part of the car, all contain this rare form of flake graphite produced only by the Joseph Dixon Crucible Co.

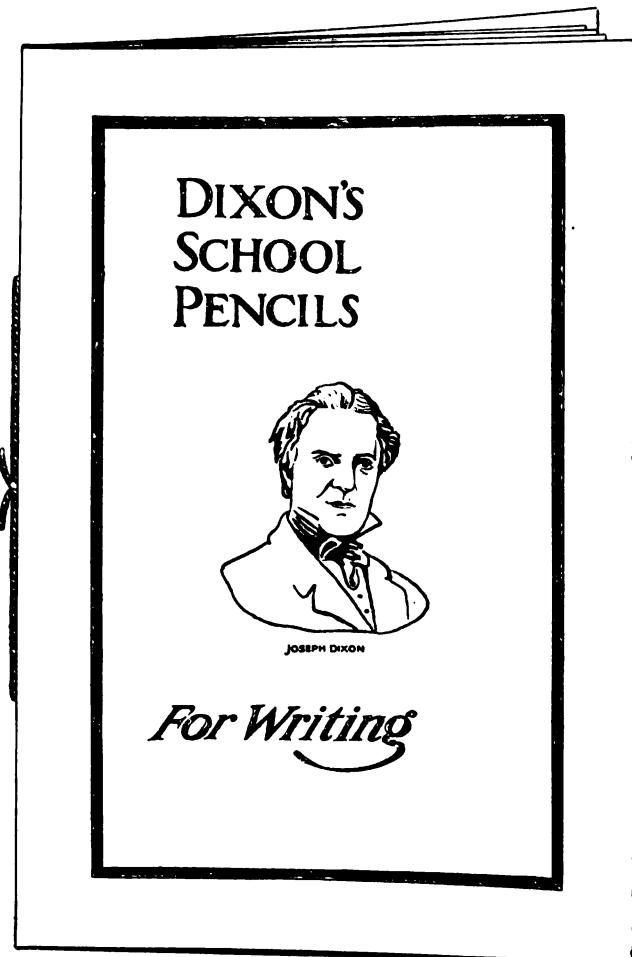
Ask your dealer for
Dixon's Transmission
and Differential Grease
No. 677.

Made in JERSEY CITY, N. J.

by the

Joseph Dixon Crucible Co.

Established in 1827



THE booklet from which the above reproduction is made, treats of Dixon's School Pencils for writing. It is, however, something more than a mere catalogue. Much of the information contained in it can not be found in print elsewhere.

In preparing it no attempt has been made to include the entire Dixon line of school writing pencils. We have indicated only those which are in most general use, and—tracing the progress of the child through the school—have noted the pencils used most largely and most advantageously in each grade.

If interested in school work, a copy of this booklet may be obtained upon request.

THE VALUE OF ABILITY

We wonder how many young men who have had their salary raised the first of the year, carefully considered the matter outside of the bare fact that they had received an increase and were glad.

We wonder how many of these same young men deserved that increase, not because of faithful service or because of increased time of service with the firm, but because they had added to their own ability and, therefore, were intrinsically worth more to the firm.

In other words, do young men look upon their brains as capital and endeavor to increase that capital by increased knowledge and experience? A five per cent. investment, whether it be bonds or mortgage, is considered a conservative and good investment. If a young man receives \$1,500 a year in the way of salary, it is the same as though he had \$30,000 invested at a five per cent. rate. If he asks and receives an

increase of \$500 a year, that means an increase to his capital of thirty-three per cent, and his salary then of \$2,000 per year is equal to five per cent on an investment of \$40,000. If any young man gets such an increase he should endeavor to make himself worth it, not only in service and in experience, but in a better equipped brain, an increased ability.

It is well said that ability without money-capital is better than money without ability. Today the opportunity for self-improvement is open to every man as it never was before, and every young man who has ideas of a business future and who lacks money-capital, should increase his ability that he may be able to make money and so possess himself of money-capital.

"Let me do my work from day to day,
In field or forest, at the desk or loom,
In roaring market place or tranquil room;
Let me but find it in my heart to say,
When vagrant wishes beckon me astray,
This is my work, my blessing, not my doom;
Of all who live, I am the one, by which
This work can best be done in the right way;
Then shall I see it not too great nor small a task
To suit my spirit and to prove my powers;
Then shall I cheerful greet the laboring hours,
And cheerful turn when the long shadows come
To play and love and rest,
Because I know for me my work is best."

We are indebted for the above impressive lines, to Chicago branch manager, Mr. Sam Mayer. They are taken from the *Annual* of the Garden City Lodge, No. 141, A. F. & A. M. The lines are in quotation marks in the *Annual* but the author's name is not given.

DIDN'T NEED HIS BRAIN

They have been telling a story at the New York Furniture Exchange lately something like the following:

A certain salesman was taken with a peculiar form of amnesia, or loss of memory, which made it practically impossible for him to concentrate his attention on any one thing for more than a few minutes at a time. He decided that he needed the expert advice of a doctor, and after losing two or three good orders he consulted a doctor.

After visiting the doctor two or three times, his visits suddenly ceased. Some weeks after the doctor met him and said: "Aren't you the man that came to me some time ago to have treatment for a brain disorder?" The man answered, "Yes." "Then," queried the doctor, "why didn't you complete the treatment, instead of disappearing from my sight after a few treatments? I am sure I didn't cure you as soon as that." "No, doctor, you didn't cure me," the man replied, "but I have been made a buyer since I saw you last, and I don't have to use my brain any more."

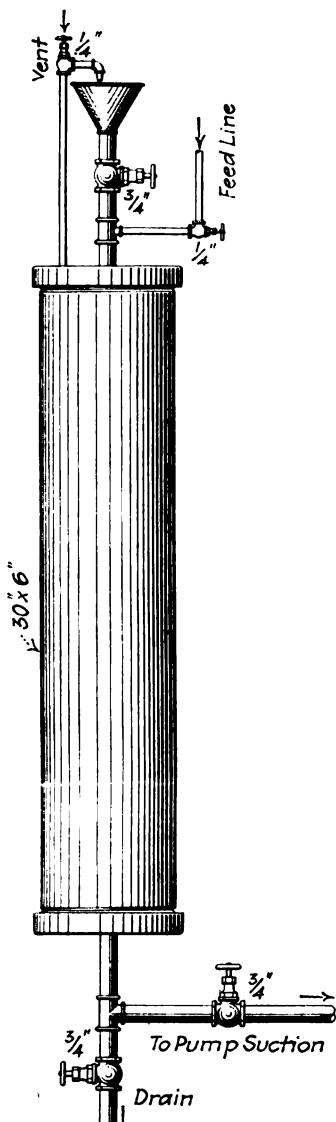
This may be a very good story and may be considered one on the buyers, but it very often looks to us as though the buyers have the salesmen beat to a frazzle when it comes to a match of wits.

DIXON's graphite publications sent free upon request.

FEEDER FOR BOILER GRAPHITE

This feeder is attached to the suction line of the boiler-feed pump on one side and the other is connected to the boiler-feed line or pressure side.

We mix a boiler compound and the graphite in a pail, and



GRAPHITE FEEDER AND CONNECTIONS

pour this into the funnel after first draining the tank. To fill, pour the liquid into the funnel, venting the tank at the small $\frac{1}{4}$ inch line. When full, close the vent and the filling valve, crack the discharge valve to the pump-suction line, then open the filling valve in the line connected to the boiler-feed line filling the tank, which being under pressure, will discharge to the suction line as fast as wanted. By feeding through the suction the graphite goes through the pump. This greatly reduces the maintenance cost of the pump. The discharge can be made to last all day or be emptied in a few minutes.—ASA P. HYDE in *Power*.

THE BUYER'S TURN FOR A DRESSING

In his rôle of schoolmaster of the American people, President Wilson should essay a new task. He has chastised the manufacturers by forcing a bill through Congress heavily sealing the duties on foreign merchandise coming in competition with

their products. He has further threatened to scourge all large corporations by greater activity in the trust-busting department of the Government and with promise of more drastic legislation. The real job now confronting him is to lash the people into a frame of mind to accept the new freedom he has given them, and to show that they are so rejoicing in that freedom that they are purchasing as freely as they did a few months ago. So far they are not accepting the new order of things in the proper spirit. They are not buying as they should, or mills and factories would not be curtailing operations and discharging workmen. What the mills need is more orders, and the people are not placing them. The president should see to this delinquency.—*Iron Age*.

SAM MAYER IN A NEW LIGHT

The following, reprinted from the Chicago *Record* of October 19, gives a glimpse of popular "Sam" Mayer in a new and interesting light. It also discloses the fact that Sam must be more than thirty years old:

"Samuel Mayer, a Chicago collector of old theatrical programs and portraits, has presented Lew Fields with what is believed to be the oldest Weber and Fields program in existence. It is from the old Turn Hall Theatre, East Fourth Street, New York, under date of Saturday, November 3, 1883, and the now famous entertainers are referred to as 'Masters Weber and Fields.'

"The playbill of thirty years ago has long rested among the other musty exhibits of Mr. Mayer's collection. The latter, who is the Chicago office manager of the Joseph Dixon Crucible Company, has offices in the Monadnock Building and a private museum of seven rooms at 1018 North State Street. Mr. Fields writes Mr. Mayer that he and Mr. Weber had been singing and dancing some four years at the time mentioned on the program of 1883, and felt themselves to be professional veterans then. So far as he knew it was the oldest Weber & Fields program in existence and the only copy.

"The playbill describes the comedians as 'Masters Weber and Fields, in their Dutch song and dance, entitled the Deitcher Picnic.'"

MILLER, FIELDS AND PERRY

On the last page of this issue of GRAPHITE we present some interesting and unusual photographic reproductions of a perilous profession and of a trio of men to whom fear is the proverbial stranger.

The trio is Miller, Fields and Perry, whose work of painting smokestacks and all other high structures, has earned for them an enviable reputation for square dealing in all parts of the South and Southwest; they maintain headquarters at 89 Brookline Street, Atlanta, Ga.

The platform of these men, as may be seen in our picture, includes a plank for the specification of Dixon's Silica-Graphite Paint. The experience of Miller, Fields and Perry with Dixon's Paint has extended over a sufficient period of time to allow them ample proof of the "longer service" rendered by the paint which they now recommend for their work.

"Smokestack Painting" is a convincing exposition, in booklet form, of the wisdom of selecting the right kind of paint for smokestacks. Write for a copy of it by number 190-B.

LUBRICATION OF THE MODERN MARINE GAS ENGINE

(Excerpts from a Monograph on the "Development of the Modern Gas Engine," by Commander J. Edward Palmer, U. S. Navy* [Retired], Reprinted from the Journal of the American Society of Naval Engineers)

The operation of the modern gas engine as applied to marine work may reasonably be expected to be eventually made nearly as reliable as that of the operation of the steam engine, provided continuous thoughtful consideration is given to the design, the construction and the supervision of all features of development of the first-named type of prime mover. The work that thousands of thoughtful and able designers are now giving to an improved gas engine ought to develop a more reliable and efficient machine, as well as one whose first cost would be very materially reduced from the prices now charged for such construction.

This statement may appear surprising to many people, because in their own experience they have probably observed that the gas engine can be thrown out of commission from comparatively small troubles. The impairments of the gas engine likewise often involve excessive expense and time in overcoming such defects.

The greatest cause of any unreliability which the gas engine of today may have is due to the want of proper care in operation. * * *

VALUE OF GRAPHITE AS A LUBRICANT

Graphite judiciously used in small quantities is an excellent lubricant when mixed with oil or grease. It is particularly good for the walls of the cylinders of the gas engines, as it is not affected by the high temperature produced by the combustion of the explosive mixtures. The oil burns up while the graphite remains. Graphite, however, has got in bad repute in many instances by too much of it being used, and the greatest care should be taken to use it only in small quantities, as any considerable accumulation is liable to stop up oil holes and pipes and clog up exhaust passages.

Powdered flake graphite may be efficiently mixed with the grease and oil. About a quarter of a teaspoonful should be put into an oil squirt-can containing oil, and well shaken up before using, as the graphite is heavier than oil and settles to the bottom if not well mixed. In engines where the splash system only is used, about an eighth of a teaspoonful of graphite may be put into the oil pocket under each cylinder once each month. When the crank case is cleaned out and new oil substituted, twice the amount of graphite may be used in each pocket. Where there is a force-feed return-oil system the use of graphite is not recommended, as it is liable to collect in the oil pipes and clog them up. A small quantity blown into the cylinders, mixed with the oil, or applied to the walls of the cylinders occasionally, will be found beneficial. * * *

There is no mystery either about the design or operation of the modern gas engine that should ultimately prevent its more general adoption for both industrial and maritime purposes. The principal hindrance heretofore to its more ex-

* Many of our readers will recall the interesting letters published in GRAPHITE some years ago from Mr. J. E. Palmer, Commander, U. S. Navy, relative to the use which he had made of Dixon's Graphite in marine work. Mr. Palmer is also an enthusiastic user of Dixon's Graphite Automobile Lubricants.

tended use has been due to the fact that too many experts have been prone to regard this type of motor as an instrument of precision and as an appliance that required exceptional skill and intelligence in its design, manufacture and operation. The development and more extended use of the gas engine will be effected if its salient principles are made more fully known to engineering students and intelligent mechanics, rather than by depending entirely upon the research work and investigation of a comparatively few skilled designers and technical experts for further improvement and efficiency.

BUSINESS COMPLACENCY

If it is best, as we are told, for a farm to have intense and scientific cultivation, why is not intense and scientific treatment of a business quite as necessary?

Business complacency is just as bad as dry rot. It is a poor business that contains no potentials—no capacity for development or possibility of accomplishing greater results and of becoming bigger and broader and of making its products more widely known and of greater demand. The feeling of complacency, the contentment that comes with good sales and the satisfaction felt by stockholders who receive good dividends is all very well, but unless plans are formulated and mapped out by wise, experienced and careful heads, a reckoning day must come, whether it be a farm or a business.

If the business happens to be one of different products, then the business should be considered not only as a whole, but each product should be as carefully considered as though the life and profit of the business depended on that one particular product.

In the future the growth and the extending of a business, if not its very life and existence, will depend more upon management than upon good goods and able salesmen.

CAPTAIN Dalroy in *The Flying Inn* claims that the drinking of "decent fermented liquor is just simply the triumph of vegetarianism." He says:

You will find me drinking rum
Like a sailor in a slum,
You will find me drinking beer like a Bavarian;
You will find me drinking gin
In the lowest kind of inn,
Because I am a vegetarian.

The Flying Inn is one of the new books that makes you forget dull care, and is a joy on a stormy night when you are lonesome, but have a bright fire and a good cigar.

FOUR SCORE and six years of the widest possible range of service—from the laboratories of gold and silversmiths to the furnaces of iron and steel founders—is the record of Dixon Crucibles.

Time and experience have allowed of the many perfections which have maintained Dixon Crucibles as the standard by which all others are judged. Booklet No. 190-A may save you money—it's free.

THE DOCTOR AND HIS CAR

How the Use of Dixon's Motor Graphite Really Won Him a New Car, Although it Looked Bad for Graphite for a Time

It is quite evident that the time has not yet passed when we may find a man filled with silly prejudice against the use of graphite. Although several hundreds of the leading railroads of the world make use of Dixon's Flake Graphite and would not think of running a locomotive without it, especially in difficult and trying work; and although mechanics generally throughout the world advocate its use, we frequently find some automobile mechanic quite ready to lay every possible mishap to an automobile if he finds any evidence of the use of graphite.

A physician of Middletown, New York, bought a Model 6-60 Kissel Car. The car pleased him in every way, but did not run at any time as he felt it should run. It seems that the Empire Garage Company of Middletown, New York, had put some of Dixon's Graphite in the timing gear case of the doctor's car, and when the car continued to run unsatisfactorily, the doctor sent the car back to New York in order that the difficulty might be located by the agent from whom the car had been bought. The following is a letter received by the doctor:

"In taking down the motor of your car, we found it in such bad condition that the writer stopped work on this motor until such time as we get further instructions from you.

"The writer advises that you come to New York at the earliest possible moment, so you can see for yourself the terrible condition which this is in. The cause is directly due to graphite having been packed in the timing gear case. This graphite has worked back into the motor. As a consequence it not only plugged up the oil strainer so that the motor was not being properly lubricated, but it has had a tendency to wear almost every part of the motor subject to wear. This graphite seemed to have the same effect as though fine emery had been thrown inside the motor. We want you to see this for yourself before the motor is cleaned out. We are wondering how it was possible for the motor to work at all in the condition that your motor was in.

"The job is in shape now so that you can satisfy yourself of its condition. It will mean the replacing of a number of parts and considerable of work to put it in condition.

"Before proceeding further, we would like to have you to see it, at which time we can give you an approximate figure of what it would cost to put your Model 6-60 Kissel in condition."

The language of the letter did not indicate to the doctor any superior intelligence on the part of the writer. While the doctor was quite ready to admit that a man may be a good mechanic and yet not be a scholar, or even able to write in a business-like way, yet he decided to take a man with him to New York and see for himself. The Empire Garage Company of Middletown sent one of their men to New York with the doctor and the secret of the trouble was soon located. They found some waste, apparently either oakum or cotton waste, in the oiler. This, and this alone, had caused all the trouble, and the people who sold the car acknowledged their fault to the doctor and furnished him with a new Kissel Car which they had had on exhibition at the New York Show.

This is one of the most aggravated cases that we have lately met with, but it is quite in keeping with the foolish prejudice which pops up every now and then against the use, and especially the intelligent use, of Dixon's Motor Graphite.

PERSONAL SUPERVISION

Personal supervision is all right if it is not carried too far. Some years ago one of the well known captains of industry in the United States used to tell a good story on himself. He was in Europe on a hurried trip, and on being invited to remain a few days at the house of a German manufacturer, he said he would not be able to accept, as he was needed at his office and was in a hurry to return to the United States.

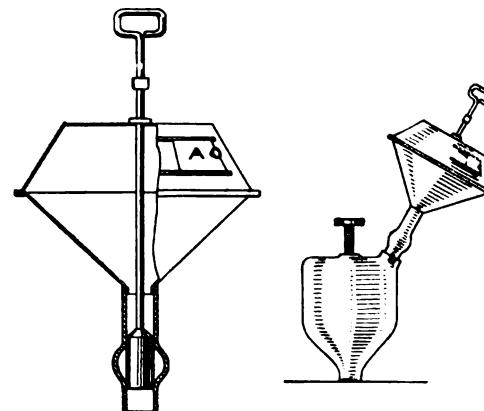
"What," said the German manufacturer, "do you mean to tell me that you, the vice president and general manager of that great concern, must give your personal supervision constantly and that you haven't an organization that can run for ten days without your being present?"

We read of another man who tells a similar story on himself. He sailed for Europe, leaving in his brother's care a parrot, of which he was very fond. All the way across the Atlantic he worried about the bird, and no sooner had he landed at Liverpool than he sent over this cablegram to his brother:

"Be sure and feed the parrot." And his brother cabled back: "Have fed him, but he's hungry again—what shall I do next?"

GRAPHITE-CUP FILLER

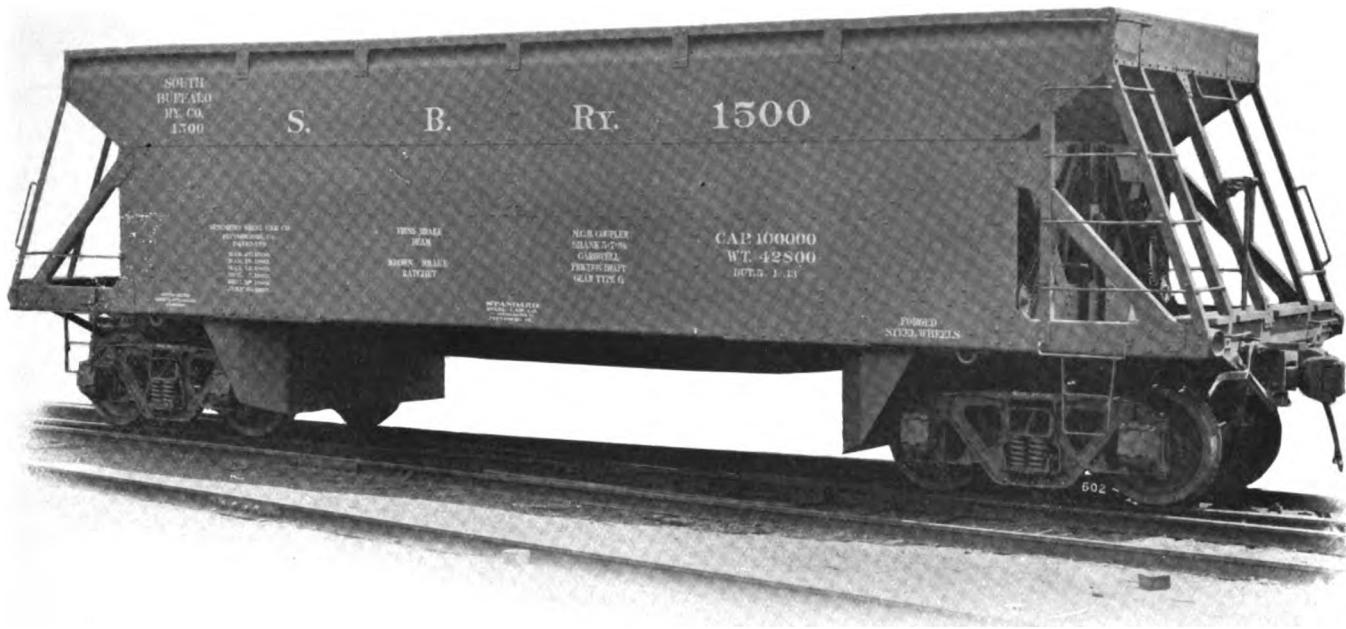
Since all modern steam pistons are lubricated with graphite, the graphite-cup filler shown will reduce the waste caused by spilling or by a gust of wind. The body, or container, is



THE GRAPHITE-CUP FILLER TAKES THE PLACE OF THE ORDINARY FUNNEL, AND PREVENTS WASTE

made of sheet metal, attached to a brass casting which constitutes the feeding device. This has a piston, worked by a $\frac{1}{4}$ inch brass rod with a handle at the top. A piece of $\frac{1}{4}$ inch tubing is soldered to this rod, above and below the top of the container, at the right distances to prevent the valve from being moved too far up or down. The door A is large enough to receive the graphite easily. It is only necessary to turn the filler into the thread of the graphite cup and work the piston.—Contributed by R. J. HEROLD, San Francisco, Cal., to the shop notes section of *Popular Mechanics Magazine*, with whose special permission both illustration and text is reproduced.

"STYLE" is highbrow for "class," but it's class work that counts with a drawing teacher. "Style" is acquired only when the class begins to work with Dixon's Drawing Pencils. As soon as your request comes we'll start booklet No. 190-J on its way. You really should have it.



STEEL CAR OF THE SOUTH BUFFALO RAILWAY COMPANY

"The wooden car," says a railroad official, "is being done away with."

"And," says *Common Sense*, "so are the people who ride in them."

As the passenger cars of steel are rapidly replacing the old wooden cars, in accordance with the "Safety First" slogan, so are the steel freight cars rapidly replacing the old type of open wooden cars. "Safety First" is also the slogan of those who are using these modern steel cars, for almost all of them are protected by Dixon's Silica-Graphite Paint.

Above is pictured one of the five types of steel freight cars built by the Standard Steel Car Company, for the South Buffalo Railway Company. Over three hundred steel freight cars have been ordered and all are protected by Dixon's Silica-Graphite Paint from the many severe conditions met with in railroad service.

THE NATIONAL GRAPHITE LUBRICATOR CO.

TRADERS NATIONAL BANK BUILDING

SCRANTON, PA., June 30, 1913.

*Joseph Dixon Crucible Company,
Jersey City, N. J.*

GENTLEMEN:—I have had the handling of steam boilers for a number of years and have used various grades of graphite in them with very beneficial results. In my experience as traveling engineer for the American Locomotive Company, covering a period of ten years, I found that a great many new boilers with small leaks that were difficult to caulk, would be entirely taken up by putting in a pound of flake graphite. Furthermore, I found that these leaks were taken up permanently, regardless of whether they were in the fire box or not, inasmuch as the graphite not being affected by high temperature, did not burn out. I have used a great deal of graphite in steam boilers around the anthracite mines, and always with beneficial results, as I found that it not only would remove

the scale but prevent the formation of scale, and that in cleaning boilers in which graphite had been used, the sheets and tubes were in good condition, and that where scale was formed, it was very soft and easily removed. It has been contended that the graphite has a corrosive effect on the inside shell of the boilers, and also on tubes, but I believe this is a fallacy, as in all my experience in the use of graphite in steam boilers, I failed to discover any corrosive action whatever.

I would certainly recommend the use of graphite in boilers and feel that the results obtained will be entirely beneficial.

Yours truly,
L. S. WATRES.

JOHN N. WILLYS, president of the Willys-Overland Company, one of the most successful men the automobile industry has produced, said in a recent address:

"The time really to make good, the time to know whether you have got a real business in any line, isn't in boom times. Anybody can be successful, anybody can sell a lot of merchandise in boom time, when the times are good. But that concern which can increase its business, which can have a larger and a growing and a better business in bad times than it has had in good times, is the concern that is going to survive in spite of any obstacle."

This reminds us that the Dixon Company was complimented in due time, because of the stand it took during the very depressed year of 1893. During that dull time, the Dixon Company increased its advertising, pushed harder than ever, and showed so much increased activity, that many of its friends anxiously inquired if the Dixon Company did not know that it was a bad business year and some others inquired if the Dixon Company had a fool who was spending its money at the wrong time. In due time, as we have said the Dixon Company was complimented on its nerve and business sagacity. Of course, if things had not gone right the nerve might have been awarded us, but there would have been no business sagacity placed to our credit.

DIXON'S graphite publications sent free upon request.



CRANE OF MENGEL BOX COMPANY, JERSEY CITY, N. J.

The illustration on this page of GRAPHITE shows the labor saving crane built for the Mengel Box Company, in the act of unloading and storing cedar logs for which purpose it was built by the McMyler-Interstate Company, under the supervision of its New York Branch, 50 Church Street, New York City.

This electrically operated revolving crane consists of a stationary tower on which is mounted a revolving cantilever truss. The machinery for operating the crane is located on the revolving truss in a commodious machinery house.

The total length of boom from center of rotation to outer end is one-hundred feet; length of counterweight extension is forty feet; the maximum working radius from center of rotation with five ton load is ninety-five feet, and the maximum working radius from center of rotation with ten ton load is thirty feet.

This machine is equipped with a one ton clam shell bucket for unloading coal.

A seventy-five H. P. alternating current motor used for operating the crane is geared to the hoisting drums which are fitted with clutches and band brakes; similar clutches drive the rotating mechanism of the crane.

Levers for operating the various functions are assembled so that the operator has a complete view of the work to be done at all times.

This crane is protected by two coats of Dixon's Silica-Graphite Paint applied by the Vassilaros Contracting Company, New York City. In the cost of labor this crane is expected to make a decided cut just as the paint with which it is protected saves in the cost of repainting by giving a longer protective service.

CANADIAN EXPORTS

Canadian exports are increasing tremendously since the Simmons-Underwood tariff went into effect. A statement issued by the Trade and Commerce Department shows that

in November, 1912, the exports of domestic agricultural products were \$24,175,000, while in November, 1913, they were \$33,417,000. Exports of domestic animals and their productions in November, 1912, were \$4,939,000; in November, 1913, they amounted to \$7,795,000. For the first eight months of the present fiscal year the total Canadian trade was \$777,624,000, as against \$713,614,000 during the same period last year.

A TALE OF TWO AUTOMOBILE SHOWS

Lieutenant A. C. Stott, U. S. Navy, Receives Inspiration at 1912 Automobile Show; Drops Sword to Pick Up Pen, After Visit to Recent Show, in Order to Acknowledge his Debt of Appreciation for Dixon's Graphite Automobile Lubricants

NEW YORK CITY, January 9, 1914.

Joseph Dixon Crucible Company,

Jersey City, N. J.

GENTLEMEN:—After seeing your very interesting exhibit at the Automobile Show, and, by the way, it was your last year's exhibit that gave me the idea of using Dixon's Graphite Automobile Lubricants, it has occurred to me that you may be interested to know that I have used Dixon's No. 677 Lubricant in my Buick Model 36 for 7300 miles to date.

So far as I can see there is no change in the appearance or quantity of the charge that I put in both the gear box and the differential. I can see no reason why I should not go on with the same filling of grease indefinitely, and from my experience with Dixon's No. 677 last season I expect to get many more thousands of miles from it.

The wearing surfaces on which I have used Dixon's No. 677 look just as they did the day I put it in, except that they have a finer polish. There is certainly no sign of wear.

You are at liberty to use this letter in any way you see fit, and you may count on me as an enthusiastic "recommender" of Dixon Lubricants. Yours very truly,

A. C. STOTT,

Lieutenant U. S. Navy.

DIXON'S graphite publications sent free upon request.



STATIONERY, BUT NOT STATIONARY

The stationers with whom space is an important consideration for displaying their stock, will appreciate Dixon's No. 1366 package of Carnival Pencils. This box occupies but little space, for it stands upright in any corner or upon the counter. It opens like a book displaying a rainbow of hues and colors. Its contents are a dozen of Dixon's Popular Carnival Pencils of hexagon shape with gilt tips and rubbers and finished in alternate stripes of a variety of colors.

The boxes are packed six in a carton.

Stationers should have our circular showing the natural colors of this Carnival package, with prices.

WHEN WEAR BEGINS

Of course it may have occurred to the user of an automobile, or for that matter to the user of any piece of machinery, that wear begins just as soon as any two bearing surfaces of his machine come into contact. We have said time and again that no matter how well bearing surfaces have been finished, that under the microscope the smoothest bearing surfaces show up like sand paper.

No one would think of running a machine without putting something between such bearing surfaces. Without some form of lubricant, heating and seizing would almost immediately take place. Oils and greases are the things first thought of and they are the lubricants that are invariably used. Without oils and greases the machines cannot be used, and with flake graphite added to the oils and greases the lessening of wear in the bearings is more than doubled. The flakes of graphite form a veneer-like coating, reducing heat and friction and enormously increasing the value of the oil or grease.

The fact that owners of automobiles who live in country places where they cannot obtain Dixon's Graphite Lubricants, send their orders in direct, asking us to ship by express twenty-five or fifty pounds of graphite lubricants, indicates how greatly Dixon's Automobile Lubricants are appreciated, and is a hint to dealers as well as to other users.

EXPERIENCE BEST OF ALL

Some men, says Mr. E. P. Ripley, president of the Atchison, Topeka and Santa Fé Railroad, have "zeal without knowledge, and enthusiasm without sanity," and George F. Swain, L. L. D., adds that in these days there is an increasing tendency to regard book-knowledge as the equipment of experience. That tendency in his opinion is pernicious. We shall in time learn the fallacy and danger of this but in his opinion, at the present time great harm is being done by taking too seriously, in questions of politics, government, economics, finance and business, and sometimes in engineering, the opinions of theoretical men whose advice we would not think of following in the conduct of our own private business.

ANY CRUCIBLE may qualify in the preliminary heats and some may run well in the semi-finals, but the winner is always a Dixon.

GRAPHITE

NEW EVERY MORNING

Every day is a fresh beginning,

Every morn is the world made new.

You who are weary of sorrow and sinning,

Here is a beautiful hope for you—

A hope for me and a hope for you.

All the past things are past and over;

The tasks are done and the tears are shed.

Yesterday's errors let yesterday cover;

Yesterday's wounds, which smarted and bled,
Are healed with the healing which night has shed.

Yesterday now is a part of forever,

Bound up in a sheaf, which God holds tight,
With glad days, and sad days, and bad days, which never
Shall visit us more with their bloom and their blight,
Their fullness of sunshine or sorrowful night.

Let them go, since we cannot relive them,

Cannot undo and cannot atone;

God in His mercy receive, forgive them.

Only the new days are our own;

Today is ours, and today alone.

Here are the stars all burnished brightly,

Here is the spent earth all reborn,

Here are the tried limbs springing lightly

To face the sun and to share with the morn
In the chrism of dew and the cool of dawn.

Every day is a fresh beginning;

Listen, my soul, to the glad refrain,

And, spite of old sorrow and older sinning,

And puzzles forecasted and possible pain,

Take heart with the day, and begin again.

—SARAH CHAUNCEY WOOLSEY.

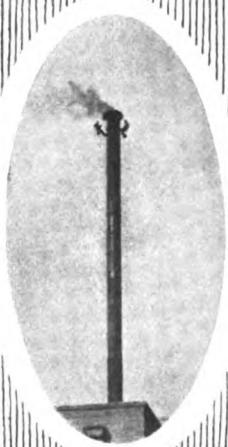
The above beautiful verses are sent us with a neat little calendar and the compliments of Mr. John A. Penton, publisher, Cleveland, Ohio.

HOW TO USE POT LEAD

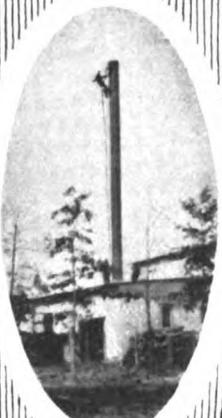
A subscriber to *Power Boating* asks in the query column of that publication how to prepare and use graphite for the bottom of a launch thirty by four feet six inches with a twenty-five horsepower engine. The boat now makes twenty miles and would like to know if it could be improved by proper graphiting.

"Mix commercial pot lead," says the editor in reply, and no doubt he had in mind Dixon's Pot Lead, "with turpentine and just a few drops of good spar varnish and apply the first coat with a brush. Successive coats apply with the lead spread on a cloth and polish as it is applied."

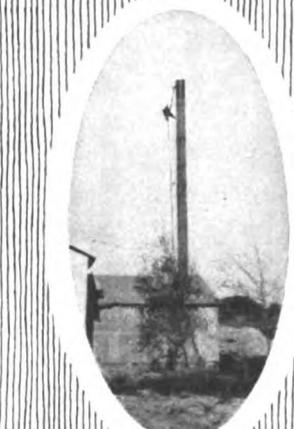
"DRINK at the fount of Eternal Youth." In the mechanical world of wisdom the lubricator is the fount and flake graphite the marvelous waters of transformation. There are no pilgrimages. In automobiles, in engines, in mines, mills and factories are thousands of tiny fountains defying the grim reaper, Friction. "Drink at the fount of Eternal Youth."



Self supporting, 6 x 110' Stack
MUNICIPAL WATER WORKS
Las Animas, Col.



Stack
COTTON GIN
Morrow, Ga.



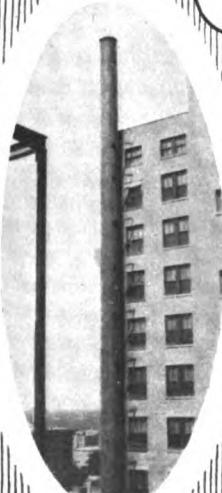
Stack
COTTON GIN
Riverdale, Ga.



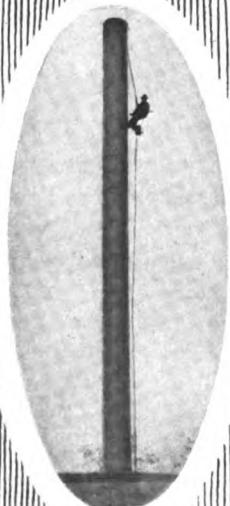
Water Tower, 135 ft. high
100,000 gals. capacity
MUNICIPAL WATER WORKS
Las Animas, Col.



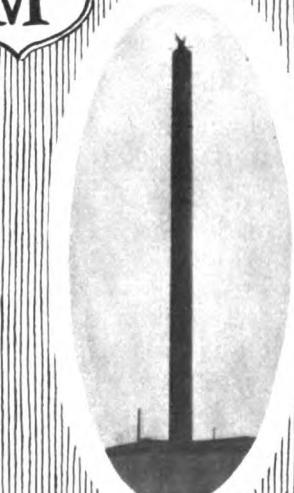
Eight Stacks, 5'x50'
UNITED OIL COMPANY
Florence, Col.



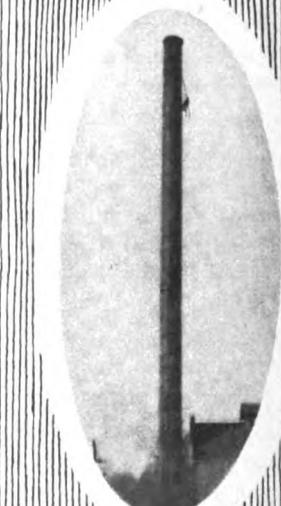
Stack, 4'x196 on 20 Story
CARTER BUILDING
Houston, Texas



Stack, 3'x50'
COLLEGE OF IND'L ARTS
Denton, Texas



Stack, 4'x90' at Pumping Sta.
CITY WATER WORKS
Marietta, Ga.



Stack, 5'x150'
KENNESAW PAPER CO.
Marietta, Ga.

DIXON'S SILICA-GRAPHITE PAINT



W.J.MILLER A.A.PERRY R.P.FIELDS



GRAPHITE



VOL. XVI.

APRIL, 1914.

No. 4.

Issued in the interest of Dixon's Graphite Productions, and for the purpose of establishing a better understanding in regard to the different forms of Graphite and their respective uses.

BIG BUSINESS

Mr. Harold V. Coes, S. B., member of the American Society of Mechanical Engineers, a member of the Efficiency Society, has an article in *The Iron Age* under date of February 5, entitled: "Can Big Business Be Permanently Dissolved?"

His sub-heading: "Woe to the Nation Which Fails to Apprehend the Natural Causes Behind the Development of World Business."

He goes on to say that big business is not a fungus growth. It is necessary, therefore, that we should fully recognize the fact that the so-called trust or big business combination is an economical development; is the product of the times and has been made possible by such agents as the telephone, telegraph and railroad—by all those agents which tend to annihilate time and distance, and, in fact, by anything that facilitates transportation or assists in spreading or communicating intelligence. That its organization is not perfect is due to our ignoring the fact that it is here to stay.

In Mr. Coes' opinion the efforts of the Federal government, through its Department of Justice, to regulate the big interests of the country are futile. If the government is to be successful in its policy, it must deal with the fundamentals and must destroy the various natural agents which have made these things possible. In other words, we are trying to violate laws just as inexorable economically as are the laws of gravitation or the laws of the universe.

What we need is equitable, just, sane, and in a certain sense elastic regulation. There is a rather prevalent idea that industrial legislation is a new issue, but this is erroneous. Various legal regulations have been attempted throughout the whole history of industry, and in what is known as the "Factory Era" we have the first piece of modern factory legislation passed in England in 1802, after a fight led by such men as Peel, Owen and Oastler. Times have changed. A greater, a more subtle and more acute conscience is present in business affairs, in the body politic.

Our ideals have changed; things we did fifteen years ago, justified then in the name of business, are not tolerated now. The world is progressing; we are suffering from growing pains. Why, for sins of omission or commission of ten or twenty years ago, should we strangle business today?

WHAT IS THE MATTER WITH UNCLE SAM?

We have the following circular letter from one of the American Consuls in South America. It is certainly worth the attention of our fellow manufacturers who are interested in South American trade. We may mention that this letter is a filled-in letter, in which the date, the name and address of the Dixon Company and the words "February 14, 1913," are made by the typewriter. The remainder is printed:

"Your letter of February 14, 1913, was received, but owing to the totally inadequate clerical force of this Consulate and the pressure of official work, it has been impossible to answer it.

"Earnest representations of the pressing need for a larger allotment for clerk hire have been made to the State Department several times during the last five years by my predecessor and myself, but without success, owing to the fact that Congress almost invariably cuts down the estimates of the Department for the needs of the consular service, each year.

"It was hoped, however, that this year a substantial increase in the allotment to this Consulate for clerk hire would have been made on July 1 last, the beginning of the fiscal year, and in that case your letter and others awaiting attention would have been answered as soon as possible.

"The State Department, however, has recently informed me that it will be impossible to increase the allotment to this office more than \$200, viz., from \$300 to \$500, and that the total of requests for increases in clerk hire at the various Consulates was almost \$50,000.00 more than the appropriation made by Congress for the current fiscal year.

"The allotments for clerk hire at many Consulates in 1913-14 have, in consequence, been reduced or withdrawn instead of being increased.

"I regret this, as I am confident that the information that consular officers would be able to give American manufacturers, in return for and with the aid of increased clerical service, would repay the expense many times over in increased exports."

CORES FOR USE IN BABBITT METAL

It is often necessary in making things of babbitt metal to core out some of the parts. A very good core is made of common salt and glue. Mix just enough of the glue into the salt to make a stiff paste, which is then formed into the desired shape or molded in a core box and allowed to harden. This kind of a core can be removed from the casting by soaking it in warm water, which will dissolve the salt and leave the desired hole.—Contributed to *Popular Mechanics* by H. F. HOPKINS, N. Girard, Pa.

ESTABLISHED 1827



INCORPORATED 1868



JOSEPH DIXON CRUCIBLE CO.

JERSEY CITY, N. J., U. S. A.

**Miners, Importers and Manufacturers of Graphite,
Plumbago, Black Lead.**

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PHILADELPHIA SALESROOM, 1020 Arch Street.

SAN FRANCISCO SALESROOM, 155 Second Street.

CHICAGO OFFICE, 1324 Monadnock Block.

BOSTON OFFICE, 347 John Hancock Building.

PITTSBURGH OFFICE, Wabash Terminal Building.

ST. LOUIS OFFICE, 501 Victoria Building.

BALTIMORE OFFICE, 1005 Union Trust Building.

BUFFALO OFFICE, 72 Erie County Savings Bank Building.

ATLANTA OFFICE, Fourth National Bank Building.

EUROPEAN AGENTS,

Graphite Products, Ltd., 218-220 Queen's Road, Battersea, London.

SOUTH AMERICAN AGENT,

Alfredo J. Eichler, 666 Calle Cangallo, Buenos Aires, Argentine.

CUBAN AGENTS,

For all Products Except Dixon's American Graphite Pencils

Croft & Prentiss, Room 424 Lonja Building, Havana.

For Dixon's American Graphite Pencils.

Harvey & Harvey, Empedrado 30, Havana.

HOW TO ADDRESS A LETTER

In the January issue of GRAPHITE attention is called to the habit of some persons in addressing business letters to an individual of the company. We explained that frequently the head of some department may be ill or away and the mail boy puts the letters addressed to that individual in some particular drawer or holds them until his return.

Our suggestion has stirred up some friendly criticism from Mr. S. S. Riegel, mechanical engineer of the D. L. & W. R. R.,

who says unless letters which are intended for his attention are addressed to the mechanical engineer or to the Motive Power and Equipment Department, they travel around considerably and reach him days later than they should.

Mr. Riegel's attitude, it seems to us, is entirely correct and hereafter, when we wish a letter to reach the attention of some particular man, we shall address it with his title or to the department in which he is employed.

SICKNESS

According to George Fitch, the humorist whose words we quote with variations, being sick is a breakdown in the human system which causes the owner of said system to lay up for repairs, automobile fashion. Sometimes these repairs can be made by the roadside by a competent licensed mechanic, who has supplied his tool box with the necessary Dixon Graphite dope in the way of dry flake graphite and graphitized ointments. At other times the human must go into the back shop for an extensive overhauling, during which his valves are reset, the bevels carefully rubbed with graphite to prevent sticking, his circulation braced up, his appendix chiseled off, his heart retimed and fresh air put into his lungs, with a small amount of graphite on the lungs to prevent them from adhering to the ribs.

Humans are subject to many mechanical troubles, and it takes an expert to keep himself in good order. Some of the most frequent troubles are overeating, overchewing (tobacco), stiff bearings, defective circulation, bad exterior finish, injured members, poor feeding and overtiring.

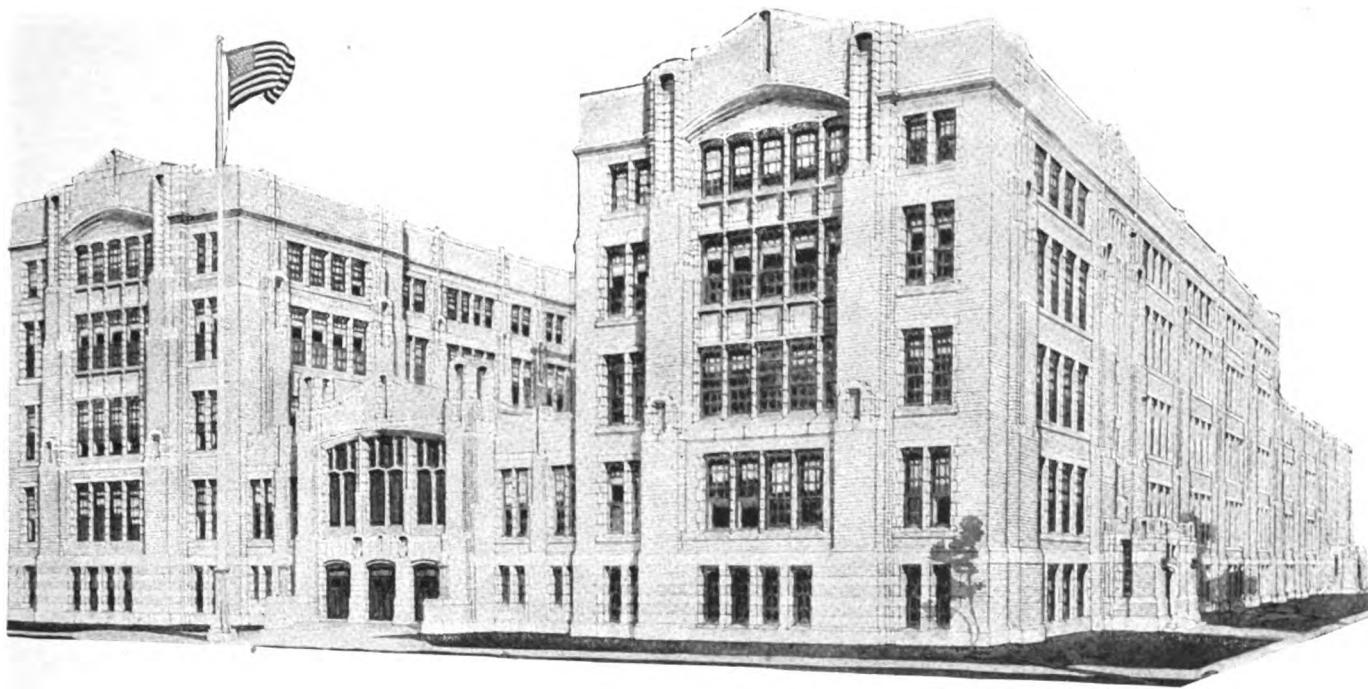
Some humans attempt to run on alcohol, which always puts them in the repair shop with cracked heads in a short time. Knocking is a great fault also. When the human being knocks continually he should be worked over with a sledge hammer until he runs silently.

When a man is sick he is a great nuisance, because he can neither work nor be coated with graphite and hung up in tire savers. Instead, he must be put to bed and nursed, while repair men from all over the country look him over at \$5.00 an hour.

When an automobile is entirely rebuilt the owner kicks wildly over a bill for \$207.45, but three repair men can take a sick man to a shop, open him up and examine his gears and sew him up again, using Dixon's Graphite Compound, so that he may be opened again without trouble, and his widow pays \$500 without wincing.

Being sick is a comparative statement. Some men are sick when their fuel does not mix properly and there is a hard day's work ahead of them, and no chewing tobacco in sight. Other men are pretty well when they are overheated to a temperature of 104, while their heads are pounding loudly and their steering gears do not work worth a cent. Being sick is a pastime with some men, but a calamity for others. Get the latter when in the market for men.

HOMER, aged three, was explaining the use of a lead pencil to his little friend. "This," pointing to the sharpened lead, "is the end you write with, and this," pointing to the rubber eraser, "is what you write with when you don't like what you sayed (said)." —*Gas Power Age*.



HUTCHINSON HIGH SCHOOL, BUFFALO, N. Y.

Among the many public buildings of Buffalo, none is more impressive to the thousands who visit the Convention City and to those who are interested in educational matters, than the Hutchinson High School Building. To its designer, H. Osgood Holland, Architect, belongs the distinction of having planned for his own city a most important extension of its educational system.

The site upon which the Hutchinson High School is built was donated to the city of Buffalo by Mr. E. H. Hutchinson. Mr. Hutchinson's residence was located upon the ground that the school now occupies. Those who were directly connected with the erection of the building are the Durolithic Company, General Contractors, and the Buffalo Structural Steel Company, Sub-Contractors, both of Buffalo. The 1,400 tons of steel required for the superstructure of the building is painted with Dixon's Silica-Graphite Paint. The specification of Dixon's Paint for this notable structure furnishes an addition to the following list of prominent buildings protected with Dixon's Silica-Graphite Paint:

Buffalo Natural Gas and Fuel Company's Building.

Atlas Steel Casting Company's Building.

Chapin Residence.

State Normal School.

Seneca Building.

Hippodrome Theatre.

Niagara Machinery and Tool Company's Building.

Wilson-Smith Building.

J. P. Devine Company's Building.

Henry Shaffer Building.

Lafayette Hotel.

St. George School Building.

International Auto League Club.

The above list is but one of the many that could be quoted as representative of the use of Dixon's Silica-Graphite Paint in other great American cities.

The illustration of the Hutchinson High School Building which appears above, is used through courtesy of the *American Contractor*.

"THE ANCHOR OF SALVATION"

A "sheet-anchor," as most of our readers know, is the anchor carried for use only in time of great need. In the Spanish language it is known as the "*ancla de salvación*," the anchor of salvation. It is well named and the same happy turn might be applied to Dixon's Ticonderoga Flake Graphite. It often becomes the anchor of salvation to the engineer on whose motors some unexpected or sudden demand has been made. Power is conserved by reducing friction and no known agent or material will reduce friction equal to Dixon's Graphite. It does it by smoothing out all microscopical inequalities of the bearings.

DEMANDING TOTAL ABSTINENCE

We read that the fact seems to have been established beyond dispute that industrial efficiency decreases with indulgence in alcohol and is increased by abstinence from it. In view of this the managers of a manufacturing establishment in Pennsylvania do not forbid their employes to drink, but they offer a ten per cent. advance in wages to all who will take—and keep—the teetotaler's pledge. Incidentally, a breaking of the promise will mean a permanent severance of relations, but there is no emphasizing of that point, it being confidently expected that the advantages of perfect sobriety will be as well realized on one side as on the other. It is stated that the offer has been cordially received by the men, and that nearly all of them have signed.

It is thought that the Pennsylvania company's experiment would be more hopeful, perhaps, if it had originated with the employes—if they had pledged themselves to total abstinence and given that as a reason for asking better pay, and then proceeded to prove it a good one by increasing output.



THE KEYSTONE ELEVATOR, CHICAGO, ILL.

The Keystone Elevator is the subject of the above photographic reproduction. It is one of many similar structures located in Chicago. The Windy City, because of its great transportation facilities and its central location in the great grain growing belt, does an enormous business in the storage of grain.

Like all other structures, the grain elevator possesses its own peculiar enemies in the way of rust elements. Perhaps the most insidious and destructive of these causes is the acid formed by the grain dust and rain water. Against this attack the elevator must be protected by a paint with practically an inert pigment, and as such, Dixon's Silica-Graphite Paint is used in so many instances that it has almost become the standard protective coating for that purpose.

The Keystone Elevator was painted by F. L. DeWitt & Company, Contracting Painters.

WHY TIRES HEAT

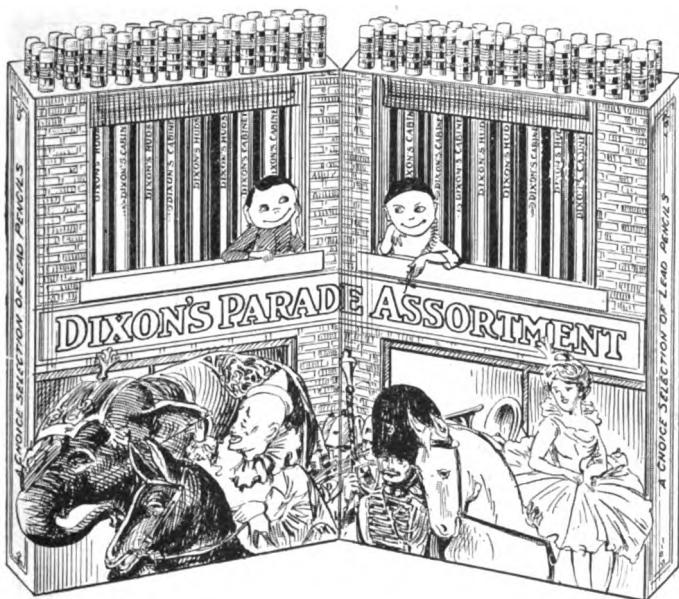
A. F. W., of Butte, Mont., writes: "I have never seen an explanation given for the heating of tires. I know that my tires get quite hot after a drive of say ten or twelve miles, especially in warm weather; but even in cool seasons they will heat quite perceptibly. Will you explain this?"

REPLY.—Tires heat for the same reason that a belt, driving any kind of machine, will heat; or a bearing, insufficiently lubricated, will become hot—the answer is friction, and that's

all there is to it. The tires of a motorcar, cyclecar or motorcycle are subjected to considerable friction, for they must "take hold" of the road, and there must be more or less slippage. The friction depends upon the kind of road, the weight of the car, the speed, and the way the car is driven, whether an even pace is maintained or the driver is given to spurring. Of course, any given point of the tire's surface is in contact with the road during only a fraction of each revolution, and during the remainder of the time it has a chance to cool as it whirls through the air. In hot weather the road is hot, and some heat is taken up in this way; likewise, the air being warm, it has not the same cooling effect as in cooler weather. It is a good practice to keep an eye on the air pressure in your tires in hot weather. If you are used to carrying ninety pounds pressure, then give them only eighty when you pump them up in the shade of the garage. You will find that the air will expand and increase the pressure as the tires heat.

From time to time we have mentioned in GRAPHITE the very great advantage of using the Dixon Motor Graphite in place of talc to increase the mileage of tires. We are told that practically every automobile racing driver uses Motor Graphite on his tires and that when some other substance is used, the mileage of the tires is very materially decreased.

AS THE comfort of a chair depends very largely on the cushions, so the comfort of an automobile depends very much on the kind of lubrication employed.



DIXON'S PENCILS ON PARADE

As the above illustration shows, the Dixon Company have again succeeded in producing a most attractive and unique assortment box of pencils.

"The Passing Show" is illumined with all the bright colors and atmosphere of a real parade and appeals to the eyes of all lovers of the clown, the drum-major and the bare back rider. It is entirely fitting that in this Dixon Parade Assortment No. 1248 the Dixon Brownies are the only spectators. They, however, as usual, seem to be more interested in each other than at the array of talent before them.

Back of the Brownies appears the real motive of the parade. The six dozen pencils are of good quality, round and hexagon shapes and finished in bright colors with tips and rubbers. The box in which they are packed is in a new style of compact form. It may be opened like a book to stand upright, thus occupying but little space and at the same time making the best display. When the box is folded a cap or hood fits over the top of it, making a square package easily transported.

Dixon's Parade Assortment No. 1248 is already becoming one of the most ready sellers that the Dixon Company have ever marketed. Prices, etc., sent upon request.

YES, ADVERTISING (^{DOES}_{DON'T}) PAY

She received from her grocer two mailing cards. One introduced a coffee and upon the outside was a picture of three women gathered about a table partaking of the contents of a percolator. The cake was as tempting as only the three-color process could make it; the percolator glistened in satiny half-tone finish and the animated expressions of the three women and the beauty of their gowns were reproduced in all their naturalness upon white coated stock of quality. Altogether the picture was so charming and so attractive that no woman could resist breaking the stamp which sealed the card to listen, as it were, to the wee bit of gossip that the picture promised to be within. And neither was the text inside disappointing. It was a letter from the grocer with his own name printed at the top and his signature in real ink at the bottom. "Why not serve —— to your guests before they serve it to you," was the concluding admonition of this letter.

The next morning the lord and master of the household remarked at the breakfast table that the coffee seemed to be particularly good. Yes, she told him, that although she had several pounds of the regular coffee on hand she thought it would be worth while to try this particular brand. It was thirty-five cents a pound.

Yes, advertising pays! Youbetcha!

Oh yes, the other card. We nearly forgot to tell about it. It introduced a jelly and was printed upon a feverish, almost poisonously yellow stock, fuzzy in its cheapness but no doubt representing the correct color of the container. A bright red wood cut reproduction of the jelly upon a plate served to suggest the many evils for which the Pure Food and Drugs Act was invented. But what is yellow stock, red ink, poor composition and old fashioned type compared to the generous offer that card carried? Presented within fifteen days (who could keep it so long?) to the grocer whose name was stamped upon it, you could receive free of charge a full sized package of jelly.

The next morning was cold and a flaming yellow and red card which the ashman discovered in a barrel, served to make him think of the thermometer in short and ugly words.

Yes, advertising don't pay! Nosiree!

DIXON'S THE ONLY PAINT TO STAND UP

The Dixon Company does a large business in protective paints with ice plants, and we are therefore much pleased to quote recommendation from so representative a manufacturer of ice as is Mr. W. C. Newman of Farmville, Va.

W. C. NEWMAN

MANUFACTURER OF ICE

FARMVILLE, VA., March 6, 1914.

Joseph Dixon Crucible Company,

Jersey City, N. J.

GENTLEMEN:—I have been using Dixon's Silica-Graphite Paint now for a number of years in connection with my ice plant and find it the most satisfactory paint I have ever used. I use the paint on brine coils, steam pipes, smokestacks and ice tanks.

Dixon's Paint is the only paint that I have found to stand up under the trying conditions which affect brine coils, and I have tried a number of brands of paint.

Yours truly,

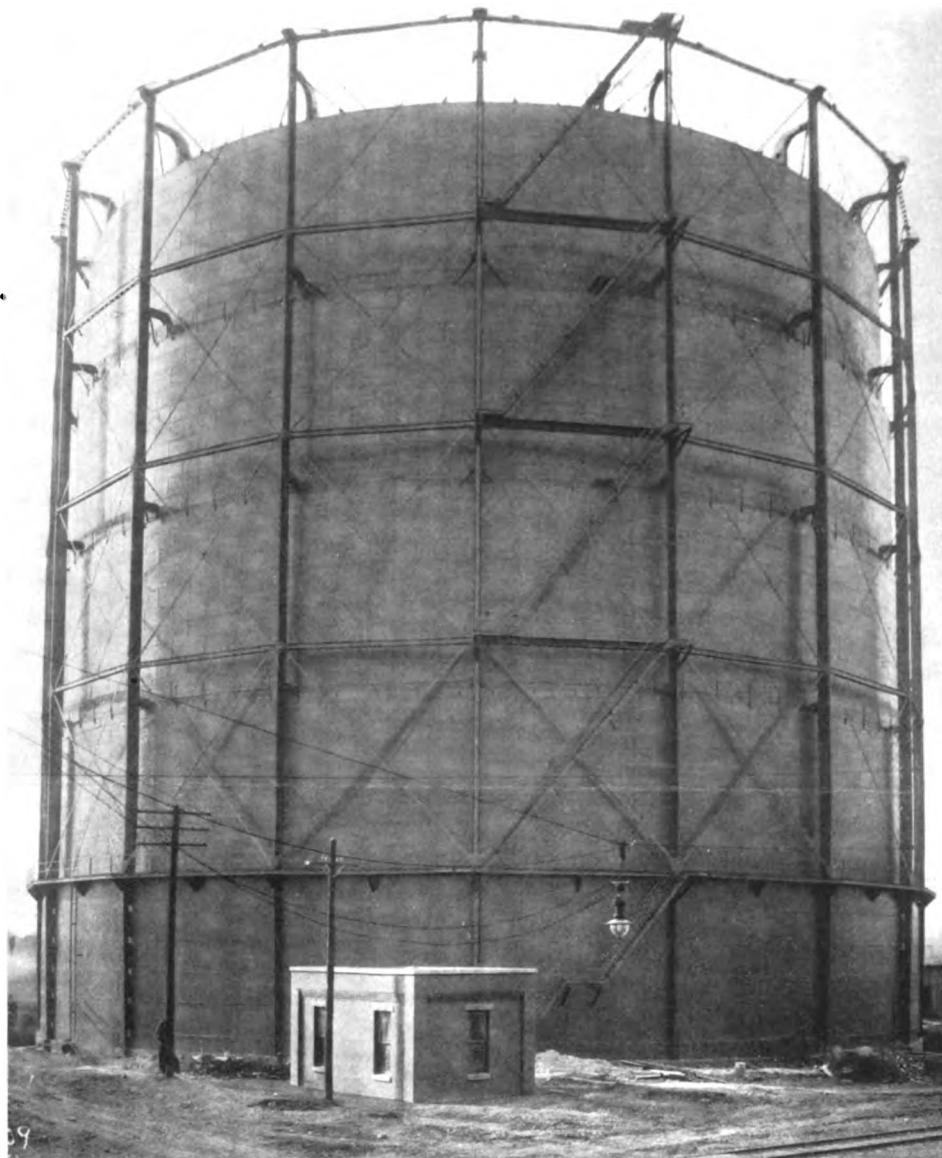
(Signed) W. C. NEWMAN.

Mr. Newman's strong recommendation is one of many references we have on file at this office regarding the excellent service being given by Dixon's Silica-Graphite Paint on ice plants. Our business with ice and refrigerating companies, we are pleased to say, is a growing one.

MIXTURE FOR AUTOMOBILE RIMS

Motoring Department, *The Globe*—How can I make a paint for motor car rims which will prevent rust?—J. T.

Remove the rust from the rims by scraping and sandpapering. Clean thoroughly and then apply a coat of ordinary shellac, mixed with some graphite. When this has dried thoroughly apply another coat. Some people use an aluminum paint to advantage.—*New York Globe*.



**GAS HOLDER, BIRMINGHAM RAILWAY, LIGHT
AND POWER COMPANY, BIRMINGHAM, ALA.**

In the Dixon booklet "Gas Holder Painting," an illustration appears of the largest gas holder in the world. Needless to say, perhaps, that structure is painted with Dixon's Silica-Graphite Paint. Its claim to distinction, however, is more on account of its size, for hundreds of other holders are painted with the same material.

As a fitting companion to the enormous holder thus cited, we present a production of what is claimed to be the largest structure of its kind in the South. It is the property of the Birmingham Railway, Light and Power Company, and was built for them by the Bartlett-Hayward Company of Baltimore. Three million cubic feet of light, heat and power is said to be the capacity of this holder.

The specification of Dixon's Silica-Graphite Paint for this important holder is in accordance with the maintenance policy

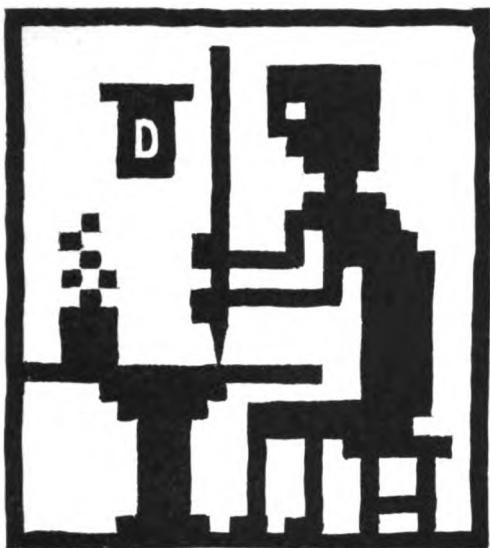
of chief engineer T. H. R. Daniels, whose economy is practiced by using only material of high standard quality.

RAILROAD PHONETIC SPELLING

Albert Kern, of the Western Union Telegraph Company, tells this one:

"Some years ago I was agent at a small station in Texas through which the International & Great Northern Railroad ran. One day a typical backwoodsman was standing on the station platform intently watching, perhaps for the first time in his life, an engine switching cars in the yards. On the tender were the letters 'I. & G. N.', meaning International & Great Northern. He spelled the letters over slowly to himself and then said: 'I-&G-N?' That's a —— of a way to spell engine, ain't it?" —*Disston Crucible*.

DIXON's graphite publications sent free upon request.



**IF in pencils you want a square deal try a Dixon.
A test will reveal that in marking no grit will you feel.**

Drawing and text by HENRY TURNER BAILEY

"HTB..."

DIXON'S PENCILS ON THE SQUARE

Something entirely new in design, odd in shape, amusing in sentiment, novel in treatment and striking in color, is the new Kubist Kalendar, by Henry Turner Bailey.

Mr. Bailey is the acknowledged leader in the United States in matters of School Arts Education. He is an art critic and interpreter of unusual insight and power and has been the personal inspiration to thousands of men and women through his writings, his lectures and his friendships.

The design reproduced above was made by Mr. Bailey for the School Department of the Dixon Company. It is similar to the imitable drawings reproduced on the Kubist Kalen-
dar. "Nobody but Bailey could have done it," so they say.

The calendar is published by the School Arts Publishing Company, Boston, Mass., and a copy may be obtained, post-paid, for ten cents.

WRONG METHODS OF SALESMEN

They Try to Sell Price Rather Than Quality

There seems to have been much complaint in dry-goods lines that salesmen are talking price a great deal more than they are talking quality. In other words, as stated above, they are selling price rather than selling quality. This statement from the big dry-goods firms may be well applied to other lines.

It is considered a very poor way of doing business. Houses which handle both imported and domestic wash dress goods are doing a far better business on their domestic lines than those who handle only domestic goods, chiefly because the salesmen can see for themselves how nearly the domestic fabrics approach the foreign ones in style and finish, and therefore they can go out and imbue a customer with their own enthusiasm, whereas those who handle only domestic goods are so cleverly met by the buyers who have so much to say about style and finish and low price of the imported goods, that the domestic salesman who is not posted on foreign lines has nothing to do but to cut his price or name the very lowest price his house has given him, in order to meet a competition which is not nearly so great as he is made to think it is. Without doubt there are foreign goods of high quality, and possibly because of the low cost of labor the foreigners may be able to do better than our home manufacturers, unless the United

States customs tariff is high enough to safeguard the home manufacturer. As a rule, however, if any salesman for any line of manufactured goods in the United States will post himself thoroughly and examine the quality and particularly the finish of the foreign goods, we believe he will be able to get better prices for his own goods. Certainly he will not be so quickly slain and thrown out by the clever buyer.

SAFER TO USE DIXON'S BOILER GRAPHITE

The M. H. Shaw Company are manufacturers of food products and for this reason find it important that the live steam from their boilers be free from all impurities. In service of this kind, chemical compounds are used only to a great disadvantage. The chief engineer of the M. H. Shaw Company writes the following letter concerning his experience with Dixon's Boiler Graphite No. 2, which he has used for about twelve months. Mr. Loch finds Dixon's Graphite to be far more satisfactory than any kind of compound because it not only removed the scale but did not affect the quality of the steam.

CHICAGO, ILL., September 10, 1913.

Joseph Dixon Crucible Company,

Jersey City, N. J.

DEAR SIRS:—We have been using your Flake Boiler Graphite for a considerable time and find it very satisfactory in removing the scale.

We were very skeptical as to graphite carrying over into the steam, especially since we're using our steam for industrial purposes, but find it more safe for our use than anything we have ever used.

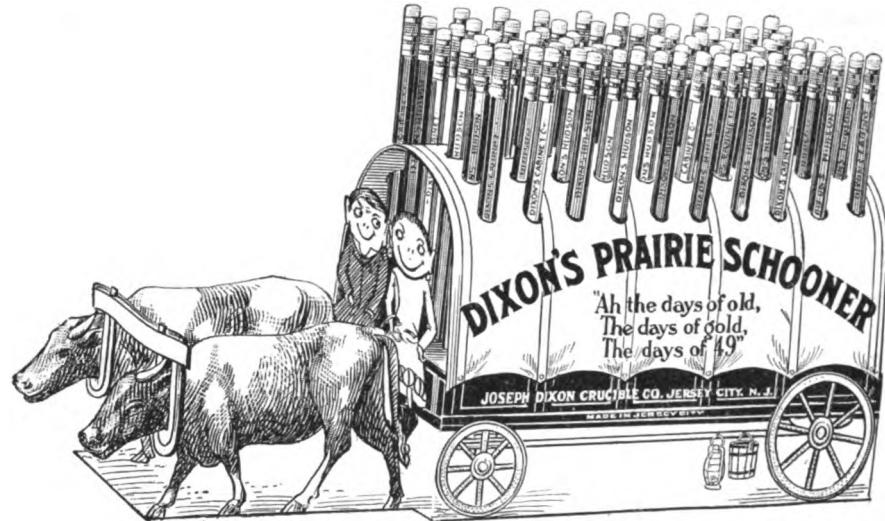
I shall be glad to recommend the use of flake boiler graphite to all engineers. Yours truly,

(Signed) PETER LOCH,
Chief Engineer.

READS "GRAPHITE" FOR TIPS

"Will you kindly place my name on your mailing list for your little magazine GRAPHITE."

"Whenever I manage to get hold of it, I find it very interesting reading and have gotten some very good tips in the use of graphite from it."



DIXON'S PRAIRIE SCHOONER PENCIL

ASSORTMENT No. 1247

The pioneers of old, who opened up the vast Western territory for the benefit of those of us who followed them, serves as the motive for the new Dixon's Prairie Schooner Assortment No. 1247. The Forty-niners have nothing on the Dixon Brownies who have for many years carried word from the pioneer of pencil perfection. In their new role as the pilots of the Dixon's Prairie Schooner Assortment, the Dixon Brownies maintain the same standard quality of the concern they represent. The Schooner contains six dozen pencils of good commercial quality; round and hexagon shapes; finished in bright colors, with tips and rubbers. The assortment is packed in a secure box for shipment.

The sale of this assortment promises to spread like the proverbial prairie fire, and we suggest to all stationers who are in the band wagon that Dixon's Prairie Schooner will provide an excellent follower to that vehicle. Prices and further information of this new pencil assortment may be obtained from the Joseph Dixon Crucible Company, Jersey City, N. J., upon request.

THE VALUE OF ACCURACY

Thirty-three years ago a young man left the Dixon Company to go into business for himself. A few days ago he sailed with his wife for a ten weeks' trip to the Orient. In bidding us good-bye on the vessel previous to his sailing, he said he would always most pleasantly remember the Dixon Company as his success in life had so largely depended upon the training that he had received at the hand of the late Mr. John A. Walker, vice president and general manager of the company. He said that he would never forget how Mr. Walker impressed him with the value of accuracy. Mr. Walker insisted that he should be exact and correct in whatever he did, and any failure in being exact was met with such severity by Mr. Walker that the young man was finally forced to get the habit of being exact and correct in every detail, and today he looks back not only with satisfaction, but with most sincere thanks to Mr. Walker and to his training.

DIXON's graphite publications sent free upon request.

CUT PRICES OR FIXED

If it is wrong and unjust for the Standard Oil Company to cut its prices on oil in a special locality for the purpose of driving out competition in that locality, why is it not wrong and unjust for the manufacturer of some other commodity to do the same?

If it is a criminal offense for a common carrier to offer special rebates to large shippers, why should not the same rule apply to those who have other things to sell besides transportation?

Is it not a bad thing to have the mail order catalogues offering certain widely advertised merchandise at less than cost as "leaders" for the deliberate purpose of making people believe that the home store is getting exorbitant profits and "robbing the public"?

In this discussion of price maintenance, it should be fully understood that price maintenance does not necessarily involve monopoly. Some firms which advocate price maintenance may resort to monopolistic methods, and these methods should not under any conditions be tolerated. Let the question of price maintenance stand on its own bottom, without confusion with other issues.—ANDERSON PACE, Editor of the "Helps for Home Stores," in *The Merchant's Journal*.

WELL MADE rope would remain unimpaired almost indefinitely were it not for outside influences. Exposure to weather is the chief cause of deterioration, a fact that has led to the use of various dressings, such as tar, to prevent rotting caused by moisture. There are various causes for the rotting and wearing of ropes, but it seems to be conceded that the alternate wetting and drying is the most destructive. Those who claim to know and who have had much experience, say that a thorough coating of graphite is one of the very best treatments for the preservation of rope. The graphite readily forms a glaze over all parts of the rope. It penetrates into the rope and prevents the different strands from rubbing one against the other. Almost any form of graphite might be used.

WHEN sharpening a pencil stick the knife blade through a slip of paper and it will act as a guard to prevent the lead dust from soiling the fingers.—*Popular Mechanics*.

SPRING IS HERE

By L. M. STOCKING

The preacher takes his homily or lesson from the spring, and advises his hearers to repair their ways.

The poets take their song from the vernal awakening: "sermons from stones, songs from the running brooks," etc.

No carol of Shakespere's is more merry than the popular "Spring Song" in the fifth act of the play "As You Like It," where the moral runs:

"and therefore take the *present time*,

With a hey, and a ho, and a hey nonino," etc., which shows that strong resolutions accompany the spring joy.

Spring is not an insignificant thing in astronomical mathematics. For instance, the earth has to swing around in its orbit 560,000,000 miles to reach from one spring to the next spring. Other brother planets in our solar system have to swing around an even larger orbit than our earth to reach their spring. The next planet to the earth, that is, Mars, swings around in 687 days, nearly a thousand million miles from one spring to another; while Neptune swings around over 18,000,000,000 miles from one Neptunic spring to the next Neptunic spring, which must be quite an event with the Neptunians.

Therefore, mathematically speaking, spring is a ponderously important matter, and not merely an "ethereal mildness" of do-nothing and dream, as one noted poet puts it.

The winter of biting melancholy and chafing ice has gone and left its injuries only too apparent. It affected even the joyful Shakespere, who could not forget the bitterness, for he sang,

"Blow, blow, thou winter wind,
Thou art not so unkind
As man's ingratitude.
Freeze, freeze, thou bitter sky,
That dost not bite so nigh
As benefits forgot."

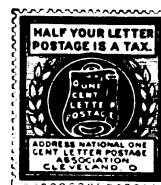
If spring can relieve and repair such melancholy and injury, it is indeed an ethereal healing season.

Every good rhyme has its reason and corollary. Here is mine in a nut-shell.

No season puts its grip and its bite harder into metal than the winter. Bridges, signal apparatus, steel cars, smokestacks, iron poles, fences, gas holders, water towers, and every kind of exposed metal structure, in the clear and pitiless light of spring, reveals the terrific and merciless wear and bite and corrosion of winter's tooth. Corrosion, unattended to, soon means a loss of strength; a structure beyond repair; a double cost for a new structure. Spring repainting is a spring resolution, as wise as it is natural.

We advise the longest made (fifty years); the "longer service," the best known, and the best made protective paint for steel, none other than Dixon's Silica-Graphite Paint, the pigment of which is Nature's unrivalled mixture of the silica and graphite, mined alone at the Dixon Company's mines at Ticonderoga, N. Y. It has been used for many years as a construction and maintenance paint for all steel work by the leading railroads and industrial plants of this country and abroad. Specify none other than this "longer service" paint,

and a longer service renders economy in labor and material. Do not be misled by a slightly lower cost for an inferior paint. Dixon's Silica-Graphite Paint is made in only ONE QUALITY —THE BEST. Made in Jersey City, New Jersey.



FOR THE fiscal year ending June 30, 1913, the total expenses of the Post Office Department were over \$262,000,000.

The first-class mail produced about \$175,000,000 of revenue, over seventy per cent of revenue from all paid mail, but its weight was only about one-eighth of the total.

Second-class mail, periodical literature, was over sixty-two per cent of the total paid mail, yet its publishers paid less than \$10,000,000 (less than five per cent) of revenue, as the rate it pays is only one cent per pound (\$20 per ton), a mere fraction of cost of service.

The Post Office reports show that first-class or letter mail pays over eighty-four cents per pound, equivalent to \$1,680 per ton. This rate is immensely profitable to the government, and last year paid a net profit of about \$75,000,000.

On the other hand, the second class cost the government about \$80,000,000, and hence the revenue from it, less than \$10,000,000, netted a loss of about \$70,000,000.

During the same year, the department received about \$20,000,000 for postal cards, the weight of which was about twelve million pounds, which means that twelve million pounds of postal cards paid nearly twice as much revenue as over 1,000 million pounds of second-class matter.

THE VERY SMALL DINNER PARTY

Some anonymous friend, as fond of puzzles as ourselves, sends us the following:

"A Chicago man wanted to give a very small Christmas dinner party, so he invited his father's brother-in-law, his brother's father-in-law, his father-in-law's brother, and his brother-in-law's father."

We are asked to tell how many guests the gentleman had at his table. We think we know how many, and we also think we recognize this problem as one of the "Tangled Tales" of Lewis Carroll. We made use of it once in one of Dixon's pencil advertisements in a school paper and the principal of a school showed quite clearly that there was one less at the table than stated in *Tangled Tales*. However, our readers may figure it out for themselves. We suggest that they make use of a Dixon Anglo-Saxon Pencil. The smooth, tough leads in Dixon's Anglo-Saxon Pencils are conducive to easy work.

WHAT IS AN EFFICIENT LUBRICANT?

Isn't It One That Will for the Longest Time Put Off the Cost of Repairs?

We believe that Dixon's Ticonderoga Flake Graphite may well be termed an "efficient lubricant." This belief of ours is founded on the fact that over 250 leading railway companies throughout the world make constant use of it, and that its efficiency had been proven by scientific experts, time and again,—proved in the laboratory and proved on the road.



**WATER TOWER, EAST PROVIDENCE WATER
WORKS, EAST PROVIDENCE, R. I.**

The accompanying illustration shows a good view of the East Providence Water Tower, which has just received a coating of Dixon's Silica-Graphite Paint, black color.

It has a total height of 230 feet, the tower section is 135 feet high and the tank is 70 x 50 feet, with a capacity of 1,000,000 gallons of water. The four central columns are filled with concrete. This tower is the *second largest water tower in the world*.

The tank weighs when filled with water, over 5,000 tons, and over a mile of tension rods are used in the tower construction.

Special attention is given by the well known engineers, Jenks & Ballou of Providence, to the care of this important structure, which is kept in first class condition.

DIXON'S graphite publications sent free upon request.

TOBACCO JUICE

We read in the *Daily Consular and Trade Reports* that there is an enormous demand for nicotine for spraying grapevines and fruit trees in the Lyon district as well as elsewhere in France. It has not been possible to obtain a sufficient supply, with the result that vineyard owners and others have had to content themselves with such quantity as was available or to employ other less desirable substances for the protection of certain crops.

Tobacco juice, which is preferred for certain uses to nicotine extract on account of the tars and gums it contains, is supplied in the form of tobacco juice fortified with forty grams (1.411 ounces) of nicotine to the liter. The price for this preparation is reckoned at the rate of \$5.40 per kilo (2.2046 pounds) of nicotine therein contained. Without mentioning names, we know of two gentlemen connected with the Dixon Company who could furnish a good supply of tobacco juice, and if all Americans were doing equally well, the United States might get a good revenue in the exportation of tobacco juice.

JOSEPH DIXON AS A PHOTOGRAPHER

To GRAPHITE readers interested in the early history of photography and especially to those interested in the many remarkable inventions of Joseph Dixon, the founder of the Joseph Dixon Crucible Company, the following will be worth while reading.

A contributor to the *British Journal of Photography* in the January 23, 1914, issue of that publication says that one of the modifications of the photo-mechanical process invented by Joseph Dixon in 1840 is "a method now in extensive use, known as the Vandyke process." This journal also reproduces an announcement written by Joseph Dixon for the *Scientific American*, concerning his experience in photo-lithography, invented in 1840 and published fourteen years afterwards. The journal acknowledges that this experiment is identical in one of its ways with the general method in vogue today of treating the lithographic stone for reversal, as follows:

(For the *Scientific American*)

PHOTOGRAPHS ON PRINTING STONE

"On reading in a late number of the *Scientific American* of a discovery recently made in France, by which a lithographic stone may be prepared, by the action of light to print, it occurred to me that a description of a process invented by myself, in 1840, may be of some interest to your readers, and perhaps be the means of leading to greater results. My process is simply to polish a stone in the usual way with a fine surface, as for transfer, and, when dry, wash it over in a dark room with a mixture of bichromate of potash and gum arabic; wipe the superfluous liquor from the stone with a fine soft sponge, and the stone is then prepared for the picture. If put into the camera in this state, as a silver plate is for a daguerrian picture, and left exposed to the light for twenty or thirty minutes, then removed and submerged, face up, in a trough of water for a few seconds, then rolled up, it will produce a negative picture of the character of a mezzotint. This may afterwards be changed to a positive, or natural one, by means of methods known to the art, such as slight biting with ascetic acid, washing well in pure water, filling in with 'composition work,' then carefully rubbing down the surface to remove the first (light drawn) picture, and the stone is then ready to receive the common preparations of acid and gum, and is soon ready to work. The above will give a general idea of the manner of proceeding; a skillful workman will soon see what will be the best mode of working. In some few trials made at the above period I had very hopeful results; but various other things of more immediate importance occupied my attention, and, requiring all my time, I laid this subject by until a more convenient season, which has not yet arrived. Seeing no better prospect for resuming it, I have hopes that some one will take it up and perfect it. Before giving the rationale on the process, I will add one variety of my experiments.

"I took a small picture of convenient size, varnished or oiled it, in order to render it as translucent as possible; this was laid with the printed side on the prepared stone, and a piece of plate glass on the top, to press the picture into as close contact as possible; the whole was then laid in the sun, and, after an exposure of some fifteen minutes, treated as before in the water, etc." (As a lithographing stone is said to be treated

for reversal today—seventy-four years after the invention of the process.)

"You will readily perceive the causes active in the production of photography. Chromic acid in combination with an organic substance, as gum, is rapidly decomposed by the action of light into green oxyd of chromium, with the destruction of the gum, while the base (potash) is left in the stone. By this operation the gum which resists the ink from the roller is removed and a strong mordant for the ink is left in its place."—JOSEPH DIXON, Jersey City, April 3, 1854.

TWO MORE QUEER ONES

We are permitted this month to add to our collection of eccentric Dixon addresses, the following specimens:

JOSEPH DIXON CRUCIBLE Co.,
DIXON, N. J.

GEOGRAPHY & HISTORY,
JOSEPH DISCORN CRUCILA & Co.

We think of suggesting to the Post Office officials that it might, after all, be a good plan to change the name of Jersey City to that of Dixon.

The Dixon "Geography," which contains a modified history of the pencil, is probably responsible for the latter address, although we should like to have someone explain to us just what "Crucila" means.

IS THE AVERAGE MAN A POOR OBSERVER?

How many men can tell the number of spokes in a carriage wheel, or the number of spokes in an automobile. Probably they have not cared to know that as a rule there is a standard number of spokes for a carriage wheel and for an automobile wheel.

You may have a friend who daily sticks a pin in his necktie with a given number of pearls or diamonds, but if you bet him cigars, he cannot tell the number of pearls or diamonds in it—ten to one he will lose. Detectives tell us that the color of a missing man's eyes was given by his sister as blue, by his brother as gray, while his father declared they were hazel.

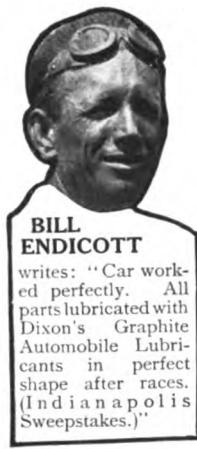
Many men see a thousand horses a day in the streets and yet cannot tell without looking, on which side the mane lies, and there are hundreds of others of country birth and bringing up who have never noticed one curious difference between cows and horses. In rising after lying down a cow always strengthens her hind legs first, whereas a horse rises on his front legs to a dog-like sitting position and then jumps to his feet.

There are thousands of curious things in life that our friends the magicians and fakers, and fortune tellers and clairvoyants know and make use of, but of which the average person has no knowledge, simply because he has never observed.

LYNBROOK, L. I., January 5, 1914.

I have used Dixon's Graphite Grease No. 677 exclusively during season 1913, and have found it far superior to any grease I have ever tried. I am pleased to recommend it to all motorists.

—H. H. Ross.



BILL ENDICOTT

writes: "Car worked perfectly. All parts lubricated with Dixon's Graphite Automobile Lubricants in perfect shape after races. (Indianapolis Sweepstakes.)"



FRANK VERBECK

writes: "Having thoroughly tested several lubricants, I am as thoroughly convinced that Dixon's Graphite Automobile Lubricants are superior to any other on the market."



HARRIS M. HANSHUE

writes: "Lubrication is simply perfect. I can hardly express myself as to the satisfaction obtained from the use of Dixon's Graphite Automobile Lubricants, which for several seasons have been used by Stutz racing teams."



GILL ANDERSON

writes: "All of our notable winnings last year were made while using Dixon's Graphite Automobile Lubricants, which for several seasons have been used by Stutz racing teams."



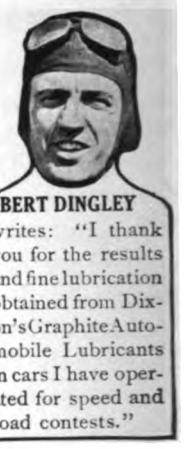
LOUIS F. NIKRENT

writes: "I thank you for the results and fine lubrication obtained from Dixon's Graphite Automobile Lubricants in cars I have operated for speed and road contests."



JACK LE CAIN

writes: "Friction reduced, wear prevented and the speed of my car increased by Dixon's Graphite Automobile Lubricants. I cannot recommend them too highly."



BERT DINGLEY

writes: "I thank you for the results and fine lubrication obtained from Dixon's Graphite Automobile Lubricants in cars I have operated for speed and road contests."



NEIL WHALEN

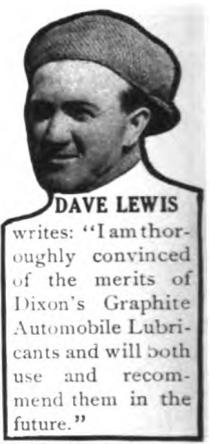
writes: "Car moves with half the effort required before being lubricated throughout with Dixon's Graphite Automobile Lubricants. I will not consider any other."

WORDS OF WISDOM FROM THE SPEED KINGS OF MOTORDOM

THE matter reproduced upon this page forms one of the most remarkable tributes ever accorded to a motor product. It has been made the subject of an attractive folder in colors. A copy of this folder will be mailed upon request to anyone. Dealers and garage men may obtain a quantity sufficient for distribution. Please ask for folder No. 190-G.

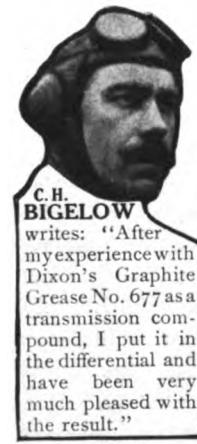
Made in JERSEY CITY, N. J., by the

JOSEPH DIXON CRUCIBLE COMPANY
ESTABLISHED 1827



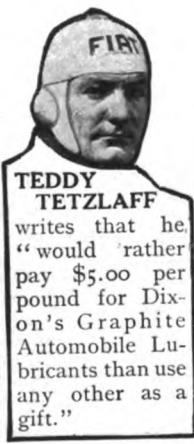
DAVE LEWIS

writes: "I am thoroughly convinced of the merits of Dixon's Graphite Automobile Lubricants and will both use and recommend them in the future."



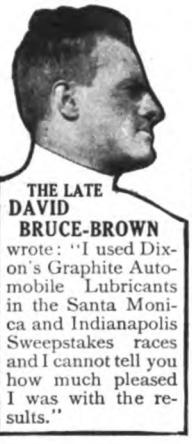
C.H. BIGELOW

writes: "After my experience with Dixon's Graphite Grease No. 677 as a transmission compound, I put it in the differential and have been very much pleased with the result."



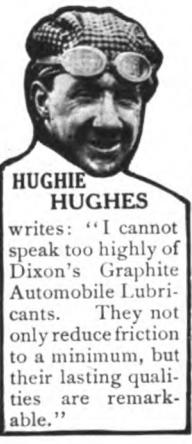
TEDDY TETZLAFF

writes that he "would rather pay \$5.00 per pound for Dixon's Graphite Automobile Lubricants than use any other as a gift."



THE LATE DAVID BRUCE-BROWN

wrote: "I used Dixon's Graphite Automobile Lubricants in the Santa Monica and Indianapolis Sweepstakes races and I cannot tell you how much pleased I was with the results."



HUGHIE HUGHES

writes: "I cannot speak too highly of Dixon's Graphite Automobile Lubricants. They not only reduce friction to a minimum, but their lasting qualities are remarkable."



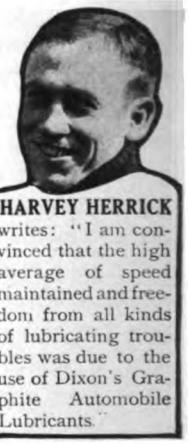
EARL DEVORE

writes: "In all my races I used Dixon's Graphite Automobile Lubricants because I consider them to be the very best in the world."



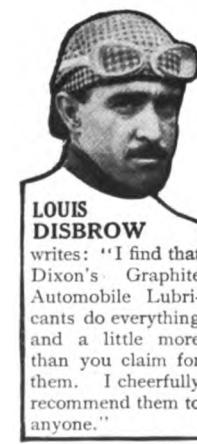
CHAS. C. MERZ

writes: "I have tried out many lubricants, but since Dixon's Graphite Automobile Lubricants were first brought to my attention I have never found anything to equal them."



HARVEY HERRICK

writes: "I am convinced that the high average of speed maintained and freedom from all kinds of lubricating troubles was due to the use of Dixon's Graphite Automobile Lubricants."



LOUIS DISBROW

writes: "I find that Dixon's Graphite Automobile Lubricants do everything and a little more than you claim for them. I cheerfully recommend them to anyone."



THE LATE HARRY ENDICOTT

wrote: "Dixon's Graphite Automobile Lubricants are the best ever and I would not be without them under any circumstances."



BARNEY OLDFIELD

after his first use of Dixon's Graphite Automobile Lubricants, wrote: "I have never before experienced the sense of safety and lubrication surely that I felt to-day."



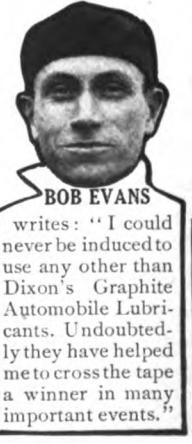
EARL COOPER

writes: "Dixon's Graphite Automobile Lubricants are about as necessary to a racing car as gasoline. I like that kind of lubrication for my little Stutz."



BILLY LEISAW

writes: "I gladly recommend Dixon's Graphite Automobile Lubricants for any car, as I believe them to be the most wonderful I have ever used."



BOB EVANS

writes: "I could never be induced to use any other than Dixon's Graphite Automobile Lubricants. Undoubtedly they have helped me to cross the tape a winner in many important events."



MORT ROBERTS

writes: "I was able to win the Pabst Blue Ribbon Trophy Race because of the perfect lubricating qualities of Dixon's Graphite Automobile Lubricants."

GRAPHITE



VOL. XVI.

MAY, 1914.

No. 5.

Issued in the interest of Dixon's Graphite Productions, and for the purpose of establishing a better understanding in regard to the different forms of Graphite and their respective uses.

LYNN HISTORICAL SOCIETY

Tribute Paid to Joseph Dixon

The city of Lynn, Mass., although more widely known as a leader in the manufacture of ladies' shoes and electrical apparatus, was one of the earliest towns of the Colony of Massachusetts Bay, having been settled by the Puritans in June, 1629, and to this day the antiquarian spirit is very strong in the community and is particularly shown by its local Historical Society, having a membership of 775.

The new building of the Lynn Historical Society was dedicated on October 9, 1913, and in the proceedings on that occasion, which have recently been published, the president C. J. H. Woodbury, gave an address on Historical Priorities in Lynn, citing a great number of events and principles which

were originated in that town. He made the following condensed statement relative to the career of Joseph Dixon:

"Joseph Dixon was an inventor in many lines, chief among which was that of the first utilization of graphite deposits in this country, making in his laboratory on Washington Street, first stove blacking, then plumbago crucibles, after that lead pencils and later the preparation of graphite for lubrication of journals under great pressure.

"Among his many other inventions, he made priorities in cutting files by machinery before he was twenty-one, and in superheated steam a year later.

"He took the first portrait by the camera and originated photo-lithography, and also the printing of bank notes in different colors, which was the first impediment outside of the law to successful counterfeiting."

In another portion of his address, Mr. Woodbury referred to Mr. Dixon in the forgotten character of one of the California pioneers of 1849:

"Joseph Dixon organized a company of twenty-one men, armed and clad in gray uniforms, to march overland to California. This company was disbanded on arrival at St. Louis and it is not known that any of them ever completed the journey in the manner contemplated at the outset."

The authorities for the statement cited by the speaker are *The New England Farmer*, Boston, February 21, 1824; *History of Lynn*, Alonzo Lewis and James R. Newhall, p. 389, George C. Herbert, Lynn, 1890; *Dictionary of American Biography*,

Francis S. Drake, p. 273, James R. Osgood, Boston, 1872; *Reminiscences of Lynn*, Thomas S. Johnson, Lynn; *Joseph Dixon: One of the World Makers*, Elbert Hubbard, East Aurora, N. Y., 1912.

INCONCEIVABLE DISTANCES

Some years ago the curator of the Astor Library, New York City, a very thoughtful and refined man, said to the writer that it was regretted how few people ever took any interest in the sky. To most people the stars were simply so many bright spots in the sky—nothing more. He added that altogether too few people realize what a wonderful book is written in the heavens.

We are reminded of this by reading the advertisement of "The Book of Knowledge." It tells us of spaces no man can measure. It tells us a train traveling at the rate of a mile a minute will require forty million years to reach the nearest star. It tells us that this train would require 166 days to reach the Moon.

50 years to reach the planet Venus.

76 years to reach Mars.

110 years to reach Mercury.

177 years to reach the Sun.

740 years to reach Jupiter.

1470 years to reach Saturn.

3160 years to reach Uranus.

5055 years to reach Neptune.

When we see a train flying by us at the rate of a mile a minute, we consider it something wonderful in the matter of speed, and we can readily grasp the idea that it would require such a train 166 days to reach the Moon, but it is beyond all conception to conceive the time required for such a train to reach the nearest star, which as given above, would be forty million years.

MR. CHAS. T. WEYMANN, representing the United States in the Hydro-Aeroplane Cup Race at Monte Carlo, was far ahead of the winner of the race and yet lost the prize. His failure to win the race was due to the fact that he did not carry sufficient oil and his motor failed him at the last moment because of faulty lubrication.

Had the motor cylinders been coated with a veneer of Dixon's Motor Graphite the probability is they would not have given trouble at the time they did.

The speed kings who drive in automobile races and win, are the ones who would not be without Dixon's Motor Graphite "if it cost five dollars a pound."

ESTABLISHED 1827



INCORPORATED 1868



JOSEPH DIXON CRUCIBLE CO.

JERSEY CITY, N. J., U. S. A.

**Miners, Importers and Manufacturers of Graphite,
Plumbago, Black Lead.**

OFFICERS:

President—GEORGE T. SMITH
Vice President—GEORGE E. LONG
Secretary—HARRY DAILEY
Treasurer—J. H. SCHERMERHORN
Ass't Sec'y & Ass't Treas.—ALBERT NORRIS

DIRECTORS:

GEORGE T. SMITH	GEORGE E. LONG
WILLIAM MURRAY	EDWARD L. YOUNG
WILLIAM G. BUMSTED	HARRY DAILEY
J. H. SCHERMERHORN	

OFFICES AND SALESROOMS:

NEW YORK SALESROOM, 68 Reade Street.
 PHILADELPHIA SALESROOM, 1020 Arch Street.
 SAN FRANCISCO SALESROOM, 155 Second Street.
 CHICAGO OFFICE, 1324 Monadnock Block.
 BOSTON OFFICE, 347 John Hancock Building.
 PITTSBURGH OFFICE, Wabash Terminal Building.
 ST. LOUIS OFFICE, 501 Victoria Building.
 BALTIMORE OFFICE, 1005 Union Trust Building.
 BUFFALO OFFICE, 72 Erie County Savings Bank Building.
 ATLANTA OFFICE, Fourth National Bank Building.

EUROPEAN AGENTS,

Graphite Products, Ltd., 218-220 Queen's Road, Battersea, London.
 SOUTH AMERICAN AGENT,
 Alfredo J. Eichler, 666 Calle Cangallo, Buenos Aires, Argentine.
 CUBAN AGENTS,

For all Products Except Dixon's American Graphite Pencils
 Croft & Prentiss, Room 424 Lonja del Comercio, Havana.

For Dixon's American Graphite Pencils.
 Harvey & Harvey, Mercedes 4 bajos, Havana, Cuba.

GRAPHITE

Graphite is one of the three allotropic modifications of the element carbon, of which the other two are the diamond and the various non-crystalline forms such as anthracite, charcoal and coke. It is found in a great many localities and is extensively mined in Ceylon, Austria, Bavaria, Italy, Mexico and in the United States, the first named producing and exporting the largest amount. In the United States, New York State is the largest producer, the mine of the Dixon

Crucible Co. at Graphite being the largest in the country. Pennsylvania, Michigan and Alabama also produce considerable quantities of the mineral, while a number of other states furnish small amounts. More of the material is imported from Ceylon than is produced in this country. There are also large mines in Mexico. The natural substance has a grayish metallic appearance, and possesses unique properties which give it its commercial value, *i. e.*, it is very soft, giving a black streak upon a white surface, has a peculiar greasy feel, and is capable of resisting very high temperatures without alteration. It is also unaffected by even the most corrosive of chemical substances, and burns but slowly even at very high temperatures.

It is found in irregular masses, often quite large, mixed, as a rule, with silicious rock, from which it is separated by difference in specific gravity.

It has been known commercially for many years, and applied, as it is today, for lead pencils, for several centuries, its name being derived from the Greek *grapho*, I write. It was originally thought to be closely related to lead, whence the name "plumbago" or "black lead." In more recent times it has found a number of other applications, notably as a pigment for paint, as a material for the manufacture of heat-resisting crucibles, as a lubricant and as an aid in the removal of boiler scale. Of late graphite has become important in the electrical and especially the electrochemical industries, it being a very good conductor of the current, as well as very refractory to heat and toward chemical reagents.

—*Practical Electricity and Engineering.*

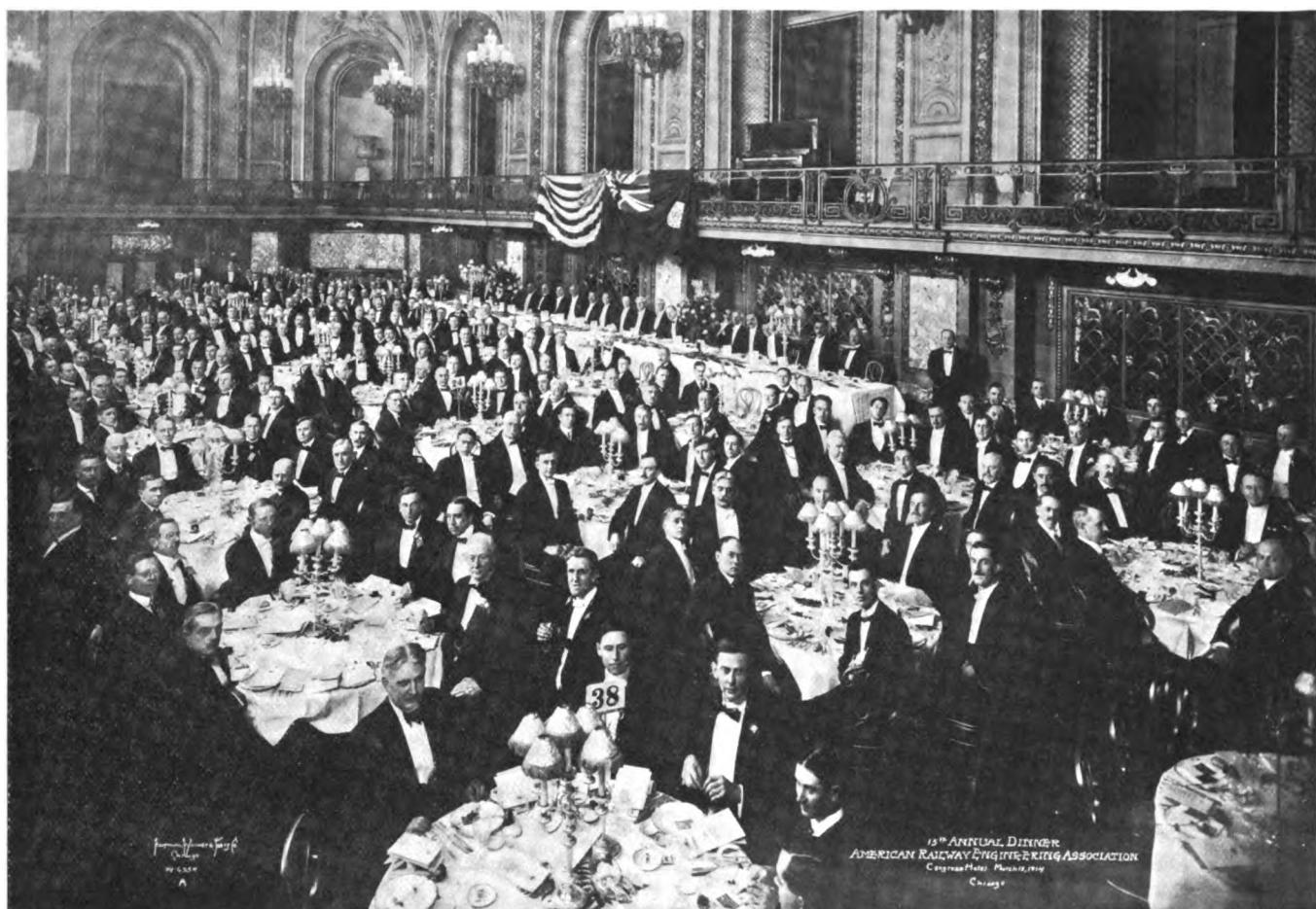
WHY ADVERTISING GOES WRONG

Do you know the man who is only half persuaded that advertising pays, but that once having embarked is wholly persuaded that it matters not how his advertising expenditure is invested? He is often a man of strong business ideas, and for that reason, together with his lukewarm faith, permits the personal equation to govern in the selection of his advertising media and his purchasing agent to dicker with a job printer regarding the production of his advertising literature. If you do not know this man, listen at the end of the year, and you will discover him to be the greatest howler that ever drew breath. And the worst of it all is that it confirms his opinion that advertising doesn't pay, or at best is only a haphazard way of securing business and good will.

WHAT IS A SALESMAN?

In the *Inland Stationer* we read that William G. Yeo, dealer in bonds, 942 Security Building, Los Angeles, was awarded the silver cup for the best definition of a salesman by the Sales Managers' Association, an organization of the sales managers of the leading business firms of the city.

Following is his definition: "One who sells, satisfies both employer and customer, justly serving the interests of both, using initiative and originality to constantly increase sales without misrepresentation or losing customers by selling something not wanted. A good salesman will study to acquire knowledge concerning the goods and their merits. Also to cultivate pleasing, magnetic, dependable personality that will inspire and hold confidence."



BANQUET OF THE AMERICAN RAILWAY ENGINEERING ASSOCIATION

The annual banquet of the American Railway Engineering Association, held in the Gold Room of the Congress Hotel at Chicago, on Wednesday evening, March 18, was declared to be one of the most successful in the life of the association.

This banquet is the principal social event each year of this important railroad convention, and the fact that the registered attendance for 1914 showed an increase of nearly twenty-five per cent over any previous record of the number of delegates attending, demonstrates the increased interest and importance of this convention in the judgment of the greatest railroad interests of the United States and Canada.

The above reproduction is from a flashlight picture, taken when all the guests were finally assembled, and it will no doubt prove interesting to the many friends of the Joseph Dixon Crucible Company who were "among those present."

The Dixon Company was represented by Mr. H. W. Chase from the home office, Mr. R. R. Belleville of the Philadelphia branch, and M. F. B. Gibbs of the Chicago branch, all three of whom were delighted to meet old friends and be able to talk up the merits of Dixon's Silica-Graphite Paint, which is used to protect bridges, signal apparatus, steel cars and any and all metal work of the leading railroads, because it is a "Longer Service" Paint.

An increase in membership was also shown by the large attendance at the Chicago Coliseum and adjacent Chicago Armory, where the exhibit of the National Railway Appliances Association was held, all of which certainly indicated a healthy

and earnest intention on the part of the railroad delegates to investigate and post themselves most thoroughly regarding future purchasing.

GRAPHITE THE RIMS

Although suggestions for cleaning and graphiting the rims of automobile wheels have been made in these columns, there are many new car owners who do not realize the importance of keeping the rims in first class condition. With the extra size tires being fitted, it naturally follows that blow-outs are not so common as formerly when the shoes were overloaded. While no one likes to change a casing until obliged to, the work is made considerably easier if the rims are maintained in proper condition.

In winter and in rainy seasons it is a good plan to remove the shoes, clean and graphite the rims or use a preparation containing this material. Mix oil and powdered graphite together, making a very thick paste. Next clean the rims, smoothing up any rough places that may exist, and apply the graphite freely. Rub off with a cloth, which will impart a bright finish, leaving a surface that will resist the action of water or moisture, and which will make changing tires an easy matter.—*Gas Power Age*.

LUBRICATING HACK-SAWS

To make a hack-saw cut metal more smoothly and rapidly with less noise, and last longer, use thereon as lubricant a mixture of two parts of tallow and one of good black lead graphite—plumbago.—*Gas Power*.

A LITTLE LEARNING IS A DANGEROUS THING

How very apt this quotation is to modern business! Any one doing an international business is often confronted with very amusing, as well as misleading statements, which, if not checked, will result in a great deal of harm.

Misleading statements are frequently made by our competitors, perhaps not maliciously, but just through ignorance. We have even seen in print assertions by those having specially treated graphite for sale, that natural graphite must be looked at with apprehension; that it is unsafe as a lubricant because it comes from the ground and that anything of this nature which comes from the ground is loaded with impurities that cannot be entirely removed. How absurd! The old adage, "People who live in glass houses should not throw stones," is only too true, for we have in mind the fact that one of the so-called prepared graphites comes originally from the most wicked abrasive known. Isn't it just as logical to draw the conclusion that such graphite should be avoided? In the first place, it is pretty hard to improve nature's own product, and anything which is made in imitation always lacks one fundamental feature which makes natural products so valuable.

We have never known of the failure of a machine that has been lubricated with graphite, but that those most concerned have assumed an air of superior wisdom and declared the trouble was due to the graphite and wondered that the machine had lasted as long as it did. The sad feature is that these "experts" are usually believed. It rarely occurs to the owner of the machine that in nine cases out of ten the failure is caused by faulty design, faulty construction, poor material, a piece of waste or other foreign matter in an oil passage, carelessness of the operator, cheap or improper lubricants or any of a hundred and one other reasons. The man who has sold the machine under a guarantee will never admit that it can possibly be wrong if he can help it, but always endeavors to fix the blame on something else—graphite if it was used. He is not honest enough to assume his responsibility and so shoulders the blame upon someone who is entirely innocent.

Frequently somebody's graphite really is to blame, but we contend that it is not so much at fault as is the man who buys it. Graphite exists in many forms and grades. Some are suitable for crucibles, others for paint or polish, or foundry facing, but only one or two kinds can safely be used for lubrication. This has been explained so often that it is not necessary here. The salient fact to remember is that all grades of graphite lubricants are sold on the reputation that has been built up during the past fifty years by Dixon. You can usually judge by the price whether a competitive brand is as good as the "old reliable." You get just what you pay for. Cheap graphite greases are inferior because they contain cheap grease and cheap graphite. A bearing will be damaged by cheap graphite because it contains grit.

We cannot prevent a man buying inferior graphite if he so pleases, but we do protest against the injustice of condemning the whole principle of graphite lubrication because such a lubricant is unsatisfactory. He invites trouble who puts cheap stuff or even the wrong grade of a good lubricant in his machine and should blame no one but himself when something happens. If thousands of expensive and finely finished machines are being operated more satisfactorily with graphite

than is possible with oil or grease alone, then a little intelligent thought should convince such a man that he evidently did not use the right stuff. A good way is to compare prices of various graphite lubricants, then select a high grade put up in a sealed package so as to avoid substitution. This practice assures satisfaction and economy.

The following clipping from a recent issue of the *Baltimore Sun* is interesting in view of the above:

GRIT IN POLICE AUTOS

DISABLING OF MACHINES ATTRIBUTED TO THE USE OF AN INFERIOR LUBRICANT

As the result of a rigid investigation conducted by the Police Board into the recent disablement of five automobile patrols, the cause has been traced to the use of an inferior lubricating preparation.

President McEvoy said that the matter had been placed in the hands of Robert F. Stanton, counsel to the board, with a view of recovering the damage, estimated at about \$700.

Much inconvenience was caused by the breaking down of the patrols and ambulances. At several station houses the patrols were out of service for nearly two weeks. Gears were burned out and parts of the automobile broken.

Lieutenant Dempsey and Chief Mechanician Edward Ullrich were called before the board to explain. Secretary Kinsey was also asked about the trouble. Ullrich and Lieutenant Dempsey blamed the lubricant.

A lubricating expert was called in consultation and a sample of the grease was sent to New York for analysis. The report of the analysis showed the sample to be of extremely low grade. In place of graphite it was said to contain grit, supposedly slate.

We understand on good authority that the graphite in this so-called lubricant was extracted from old crucible shells, and the company who sold it is now facing a law suit as a result of the damage done. Incidentally, all graphite lubricants are taboo by the police department, temporarily at least. The worthy must suffer with the bad.

A 1914 MODEL

Little girl, you look so small,
Don't you wear no clothes at all?
Don't you wear no "shimmy" shirt?
Don't you wear no petty skirt?

Just your corset and your hose,
Are those all your underclothes?
Little girl, when on the street,
You appear to be all feet.

With your dress so fearful tight
You are sure an awful sight;
Nothing on to keep you warm,
Crazy just to show your form.

Little girl, you won't live long
Just because you dress all wrong,
And soon, I do believe,
You will dress like Mother Eve.

—*Gas Power Age.*

FIRE ROUTS ATLANTA DEALER

Fire recently destroyed the McKenzie Building, one of the many structures that have earned for Atlanta the *sobriquet* of "The Little New York of the South."

With the McKenzie fire a long, hard and stubborn battle was waged and firemen were time after time repulsed by dense clouds of smoke. The scene pictured below shows the gallant effort which firemen made to save the stock of the Johnson-Gewinner Company, located upon the ground floor of the building.

In this picture of smoke, flames and water may be seen the sign which to all good motorists is a guide to better and



more economical lubrication. And if we believe in signs, it may be possible that the supply of Dixon's Graphite Automobile Lubricants within, as well as the sign without, escaped in some salamanderlike fashion the destruction wrought elsewhere.

Our sympathy and hope for a speedy resumption of business have been extended to the Johnson-Gewinner Company.

THE HABIT OF DOING ONE'S BEST

This habit of always doing one's best enters into the very marrow of one's heart and character; it affects one's bearing, one's self-possession. The man who does everything to a finish has a feeling of serenity; he is not easily thrown off his balance; he has nothing to fear, and he can look the world in the face because he feels conscious that he has not put shoddy into anything, that he has had nothing to do with shams and that he has always done his level best. The sense of efficiency, of being master of one's craft, of being equal to any emergency,

the consciousness of possessing the ability to do with superiority whatever one undertakes, will give soul satisfaction which a half-hearted, slipshod worker never knows.

When a man feels throbbing within him the power to do what he undertakes as well as it can possibly be done, and all his faculties say "Amen" to what he is doing and give their unqualified approval to his efforts—this is happiness, this is success. This buoyant sense of power spurs the faculties to their fullest development. It unfolds the mental, the moral and the physical forces, and this very growth, the consciousness of an expanding mentality and of a broadening horizon, gives an added satisfaction beyond the power of words to describe. It is a realization of nobility, the divinity of the mind.—*Success*.

The *Thresherman's Review* thinks that a mixture of graphite and oil is about as good a remedy for a journal that is cutting as anything that could be used. This advice was given to a subscriber who asked for it in the March issue of that publication.



JOHN A. MOTTO

It was with deep regret that the Boston office of the Dixon Company announced to New England customers the death of Mr. John A. Mott. The acknowledgments received show plainly the high esteem in which he was held by the many concerns he called on.

To quote from a letter from one of the firms who wrote: "We regret very much to hear of Mr. Mott's death. We had come to look forward to his visits as bringing a little streak of sunshine into the office."

Mr. Mott was a salesman having an unusually pleasing personality. He will be greatly missed by a large circle of friends.

SCHOOL AND SCHOOLING

"Every man is as Nature made him," said Douglas Jerrold. But some are a damsight worse.
And the reason is obvious.

We go through life as if we had a cat's immortality, believing that there are eight others to follow.

We give no thought to careful and systematic self-culture. We go to school because we must, and we leave it as early as we dare.

Education is a matter of statute, and not of desire. There is a law throughout Nature which tends to defeat what is not trained.

We see evidence of it in our fields and in our business. The one thing which Nature will not stand for is the feeling that a thing is good enuf.

The thing that is good enuf will soon be good for nothing. Caesar Augustus said Rome was great enuf, and the "Law of Defeat" got right to work and tied the can on its progress.

This law governs man. It allows him to quit school, but it defies him to quit schooling.

If it doesn't keep him in training, he'll go backward—there is no stationary condition.

I know a man who when he left college did not leave behind him the desire to train on.

GRAPHITE

He read good books, not in a systematic way, perhaps, but he read them just the same.

He was partial to those little classics that he could slip into his coat pocket, and the time he spent on the street cars and on trains was put in by reading them, instead of looking vacuously out of the window or staring vulgarly at the man across the aisle.

The cumulative benefit of these "half hours" of study can never be computed.

Stretched over a period of twenty years they gave him a fair hold on art, literature, science and history.

I might even confess that they gave him what little ability is required to write this magazine every month.

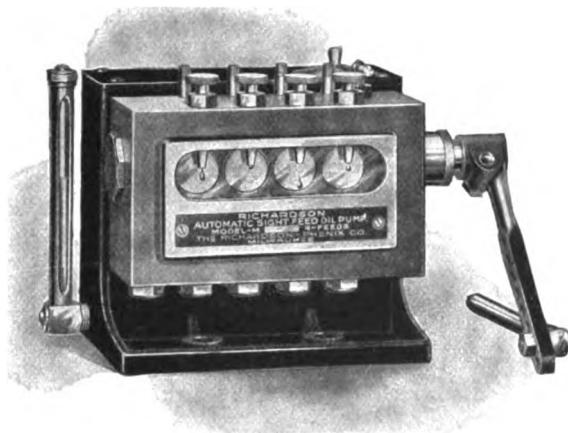
—NELSON MACY in *Common Sense*, the house organ of Corlies, Macy & Company.

THE BIG MEN

The big men dare, and the big men do,
They dream great dreams, which they make come true;
They bridge the rivers and link the plains,
And gird the land with their railway trains;
They make the desert break forth in bloom,
They send the cataract through a flume
To turn the wheels of a thousand mills,
And bring the coin to a nation's tills.
The big men work, and the big men plan,
And, helping themselves, help their fellow man.
And the cheap men yelp at their carriage wheels,
As the small dogs bark at the big dogs' heels.
The big men sow while the cheap men sleep,
And when they go to their fields to reap,
The cheap men cry,
"We must have a share
Of all the grains that they harvest there!
These men are pirates who sow and reap,
And plan and build while we are asleep!
We'll legislate till they lose their hair!
We'll pass new laws that will strip them bare!
We'll tax them right and we'll tax them left,
Till of their plunder they are bereft;
We'll show these men that we all despise
Their skill, their courage and enterprise!"
So the small men yap at the big men's heels,
The fake reformer with uplift spiels;
The four-eyed dreamers with theories fine,
Which bring them maybe three cents a line;
The tin horn grafters who always yearn
To collar coin that they do not earn.
And the big men sigh as they go their way;
"They'll balk at the whole blamed thing some day!"

—WALT MASON.

WE READ that Henry Bedlow, ninety-one years old, formerly of Newport, but now a resident of New York City, is heir to \$300,000. Some of the Dixon boys wonder what good \$300,000 is to a man ninety-one years old, and claim that he cannot begin to have the fun with it that they would have, but then if he had gotten it at their age, he might not have put behind him ninety-one years of life.



"THE ARISTOCRAT OF ALL LUBRICATORS"

This is the advertising *nom de plume* of Richardson Lubricators, a product of the Richardson-Phenix Company of Milwaukee, Chicago and New York. The Richardson Model "M" Lubricator is the particular type described and illustrated in the Richardson-Phenix Company's Bulletin Number 53. This model is of particular interest to users of Dixon's Flake Lubricating Graphite because of its successful installation in so many prominent places and because of satisfactory results it has given in feeding to steam cylinders a mixture of graphite and oil.

A unique method of calling attention to the prominence of those who use Richardson Lubricators is illustrated in the bulletin mentioned, which reproduces a view of the famous billion dollar sky line of lower New York. Over a score of arrows point from the sky to as many notable sky scrapers below, and each arrow points to an installation of Richardson Lubricators.

The interesting and exclusive feature of the Richardson Model "M" Lubricator is an auxiliary pump plunger, which eliminates any possibility of graphite settling out of the oil in the lubricator tank. The action of this plunger in taking the oil from the reservoir tank, delivering it across through the circulating channel and back to the tank, insures a continuous circulation of oil in the lubricator which in turn tends to keep the graphite in circulation.

In determining which form and grade of graphite was to be recommended for use in their Model "M" Lubricator, the Richardson-Phenix Company experimented with Dixon's Flake Graphite No. 2, and the following is quoted as an indication of how well pleased they are with the result:

"We think you will be interested in our success in using Dixon's Flake Graphite No. 2 with our Richardson Model "M" Cylinder Lubricators.

"In one plant there are twelve two-feed Model "M" Lubricators supplying cylinder oil and Dixon's No. 2 Flake Graphite to vertical engines 28" x 68" x 48", operating at ninety four R. P. M. In this plant Dixon's Graphite enables them to use a cheap cylinder oil (costing about twenty-two cents). On several occasions they have tried to run the engines without graphite but found that the oil alone would not give satisfactory lubrication and in order to use oil only, they found it necessary to use much higher priced cylinder oil.

"In the plant mentioned they use one ounce of *Dixon's Graphite* to each three gallons of cylinder oil. This mixture is

put in our lubricators, which are of four pint capacity, and contain enough oil to furnish the engines with lubrication for about three hours.

"Thanking you for your co-operation, which enabled us to find the best kind of graphite to use with our lubricators, we are,

(Signed) GEO. F. FENNO, *Sales Mgr.*"

It is very gratifying to have such a firm as the Richardson-Phenix Company declare its faith in Dixon's Flake Lubricating Graphite. Our advice to those who are not familiar with the "little-drop-per-stroke" principle of operation of the Richardson and how it reduces oil bills fifty per cent, is to write and ask about it.

GRAPHITE REDUCES SCALE FORMATION

Having read the various articles and comments on the use of graphite in steam boilers, I am moved to relate my experience.

The scale evil has always been serious with us, and seemed nearly impossible of prevention. We have two 120 H. P. horizontal return-tubular boilers in continuous service from June until September 20, both boilers being run at full-rated capacity. The conditions make this service necessary. As an illustration of the amount of scale taken from the boilers after such runs, my records show that at the end of the 1912 season, 350 pounds of scale was removed from each boiler.

On June 16 and 27, 1913, Nos. 1 and 2 respectively, were put in service, each having graphite fed in, but not strictly according to directions. No. 2 boiler gave twenty-five and a half pound of scale when it was cleaned on October 14, and No. 1 gave forty-nine pounds. There still remains a little scale in each boiler, which is expected to come off at the next cleaning.

Fearing that the scale might be thrown down in such quantities as to bag the shell, I fed in daily only one-fourth the amount specified in the directions.

—FRANK C. B. SPEARE in *Power*.

WE ARE told that "absolute zero of temperature" is the lowest possible temperature which the nature of matter admits; the temperature at which the particles whose motion constitutes heat would be at rest. In other words, friction causes heat and the heat tells us that the particles which form the metal have increased the rapidity of their motion. As the particles increase in the rapidity of their motion the heat increases until the time comes when we say that the metal has melted. In other words, the rapidity of the motion in time causes so much heat that the metal comes to that condition which we call liquid.

Anything that will prevent friction by preventing the metal to metal contact of bearing surfaces, prevents the rapid increase of motion of the particles and so prevents rapid increase of heat. In all probability there is no material so peculiarly adapted for this purpose as thin Ticonderoga flake graphite.

The thin flakes of graphite build up the microscopical irregularities of the bearing surfaces, forming a veneer-like coating on the metal of marvelous smoothness and endurance. This veneer-like coating prevents the actual contact of metal to metal and makes possible the use of lower grade oil or grease lubricants and the use of less lubricant.

A NATIONAL CHARACTER

At the annual meeting of the school superintendents of the United States which was held recently at Richmond, Va., the school men representing the Dixon Company had the pleasure, not only of voting for, but electing superintendent

Henry Snyder of Jersey City, N. J., to the position of President of the Department of Superintendence of the National Education Association of the United States.

To those who are not acquainted with the methods pursued by this department of educational work, we will say that it is the first time in a great many years that the president has been elected from a city with such a comparatively small school enrollment as Jersey City. In the past the president has generally been elected from the larger cities. This goes

HENRY SNYDER
Superintendent of Schools, Jersey City,
President Department of Superin-
tendence, 1914-1915

to prove the truth of the saying which has been so often quoted, and which we have slightly altered to suit the occasion, that: "If a man can write a better book, preach a better sermon, or be a better superintendent than others, though he teaches in a lesser city, the world will make a beaten path to his door."

Someone made the suggestion at the meeting that the election of Superintendent Snyder put Jersey City on the map, now everyone that has ever heard of the Dixon Company knows that Jersey City has been on the map for a great many years, and we are naturally proud that the superintendent of our schools has been elected to this honorable position.

"THE MAN WITH THE SPARK"

Have you ever seen an automobile standing on the road, apparently spic-and-span and in good condition, yet absolutely powerless?

It may have electric lights and self-starter and "one man top" and demountable rims, and twelve inch upholstery—but while it is a thing of beauty it is *not* a "joy forever"—at least not until the garage man comes along and brings a *new set of batteries*. For the trouble is, the car has *lost its spark*. Without that spark all else is useless.

Many men there are similarly affected—men who have *lost their spark*—who possess outward appearance, gentility; who are willing enough to do; who may have had a good education; who show up well enough until action is required!

Every business seems to have its quota of these "sparkless" men. In surface analysis their opinions shine like the 1914 car. But when they are needed to put "punch" or "go" into a proposition, they "miss" in every cylinder.

The spark of originality—that's the most difficult of all to strike.

The spark of energy—just as necessary.

The spark of sincerity—how rare, only those experienced in the quest can verify!

Some men have energy in static form—as in the car with the batteries. They must be "charged" at regular intervals, or they will run down.

Others have a dynamic spark—self-created. Their mental magneto is always on the job. They climb hills of difficulty with ease, go through the rough places of a campaign "sweet running"—and they have plenty of reserve power.

—RICHARD A. FOLEY in *The Advertising Digest*.

TWELVE THINGS TO REMEMBER

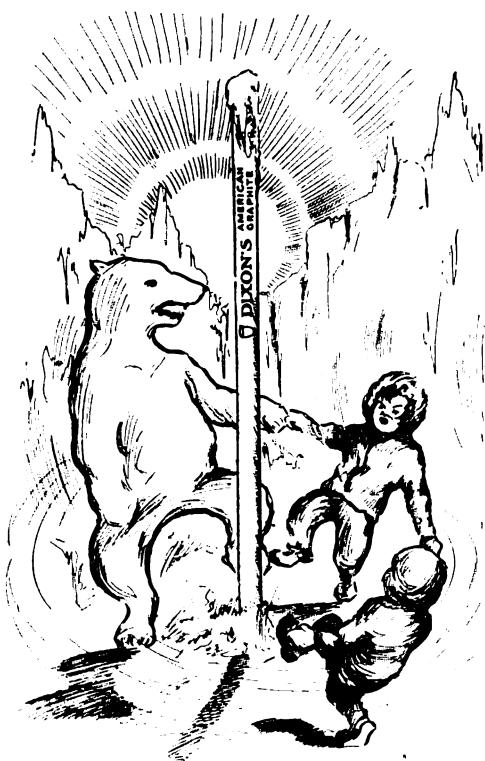
By MARSHALL FIELD

- The value of time.
- The success of perseverance.
- The pleasure of working.
- The dignity of simplicity.
- The worth of character.
- The power of kindness.
- The influence of example.
- The obligation of duty.
- The wisdom of economy.
- The virtue of patience.
- The improvement of talent.
- The joy of originating.

DIXON CRUCIBLES

mean the standard of excellence
and anything upon which the name of Dixon is placed
is a guarantee of its purity, strength and its effectiveness
Elbert Hubbard
made in JERSEY CITY, N.J. by the
JOSEPH DIXON CRUCIBLE COMPANY.





DIXON AND THE NORTH POLE

It is some time since we have had occasion to use in GRAPHITE the picture of the polar bear and Arctic explorers shown above. This occasion of its use, however, was forced upon us by the insistent claims of Mr. John A. Condit, manager of the Dixon Company's Buffalo Office, to the fact that he was the first to claim the North Pole as a legitimate part of his territory. Mr. Condit was at first so pleased with his discovery that he claimed the Pole as belonging to his territory only, but we finally persuaded him that our Boston and our San Francisco Offices, as well as numerous other Dixon representatives, had an equal right to share the glory of his discovery.

So far as we know, Mr. Condit has not laid in a stock of gum drops and glass beads and will not send a salesman to visit the new territory.

WANTS THE EARTH

A New York school boy writes to us as follows: "Will you please be so kind is to send me a sample of your two Hemispheres. If so you will oblige me."

The "Hemispheres" are illustrated in Dixon's Pencil Geography, a copy of which we mailed to this embryo real estate merchant.

Another New York boy makes the following determined request: "Dear Sir please send me a pencils if you havend a pencil send me a book if you havend a book send me a difren-think i send you on letter and i haven got no ans"

"GETTING THINGS TO WRITE"

A prominent metropolitan business school asks us to "Kindly duplicate our recent order for Dixon's American Graphite Pencils. We have not used the others, for burglars broke into our place last night and I suppose appreciating good things when they see them, added all of our pencils to their booty."

THE SPIRIT OF BROTHERHOOD

The following verses were incorporated in a weekly letter to members of the Rotary Club of Buffalo. We feel sure that they were written with a Dixon's Rotary Pencil. Mr. John A. Condit, manager of the Dixon Company's Buffalo Office, sent them to us for reproduction in GRAPHITE. Although Mr. Condit writes that he does not know where these verses came from, we think that very probably they are from the pen or pencil of Nixon Waterman. At any rate, we are disposed to credit Mr. Waterman with this charming bit of sentiment, although if any GRAPHITE reader corrects us we shall be glad to make amends.

If I knew you and you knew me,
'Tis seldom we would disagree;
Though often having clasped hands,
Both often fail to understand
That each intends to do what's right
And treat each other "honor bright,"
How little to complain there'd be
If I knew you and you knew me.

Or when some goods you "fire back,"
Or make a "kick" on this or that,
We'd take it in good part, you'd see,
If I knew you and you knew me.
With friends, ten thousand strong,
Occasionally things go wrong—
Sometimes our fault, sometimes theirs—
Forbearance would decrease all cares;
Kind friend, how pleasant things would be
If I knew you and you knew me.

SPENDTHRIFT OR MISER

A Salesman Cannot Determine Whether He Was Too Liberal or Too Stingy

Here is the story which comes to us in the form of a clipping from some unknown publication:

Recently I thought it would be a good stroke of business to entertain four of my customers at one time, feeling it would be a saving of wear and tear, time and expense; so I suggested a trip by boat to Coney Island, embarking at Battery Place.

When on my way to the dock I overheard one buyer, who is very close, say to one of the others that the profits in my line must be very large to enable me to entertain so many customers and that in future he would avoid my line. I therefore changed my mind, and suggested to the bunch that, the day being warm, the boats would be crowded and uncomfortable, and Coney Island likewise. I then proposed a visit to the aquarium (entrance free), a trip to Staten Island on the Municipal Ferry (fare five cents each), a trolley trip to Midland Beach (fare, five cents).

On my way home I heard one of the other customers say that he wouldn't do any more business with me, because I was too stingy.

I am now kept awake nights trying to find out what is the best policy, a parsimonious one or a liberal one.

DIXON'S graphite publications sent free upon request.



NORRIS GRAIN ELEVATOR, CHICAGO

The great grain elevators of Chicago represent an important industry without which the Windy City would suffer in comparison with other great industrial world centers.

In the painting of such structures owners and managers are sometimes misled by profit-seeking contractors, although to have recorded in the April and in the present issue of GRAPHITE, two of many instances of more efficient maintenance is suggestive of a general recognition of protective paint values.

In painting the Norris Elevator, pictured above, F. L. De Witt & Company, Contracting Painters, used Dixon's Silica-Graphite Paint, and Norris & Company, owners and operators of the Norris Elevator, are assured of a protective service that will for some time to come put off the expense and annoyance of repainting.

"BITING" SARCASM

Even the clearest and most perfect circumstantial evidence is likely to be at fault, after all, and therefore ought to be received with great caution. Take the case of any pencil, sharpened by any woman; if you have witnesses, you will find she did it with a knife; but if you take simply the aspect of the pencil, you will say she did it with her teeth.

—*Pudd'nhead Wilson's Calendar.*

"DICTATED BUT NOT READ"

Sending a "dictated but not read" letter is about on a par with sending a salesman to a customer with a note such as this: "This is our salesman all right, but we are not responsible for his representation of our goods."

The fellow who invented the "dictated but not read" stunt must have been a cheap mail order crook, who wanted to create the impression that he was very busy indeed.

It is a very bad example to follow. For the man who hasn't time to read his letters ought to have a capable assistant to dictate and read and sign his correspondence, or else he ought not to be in business.

The "dictated but not read" letter is a reflection upon the stenographer as well as upon the office staff and the methods of the concern.

Moreover, it is an insult to the recipient. It is apt to convey to him the impression that this wasn't a very important letter, and that the sender didn't think enough of it to read it or see that it properly conveyed his message.

Still, some concerns do continue to send them out.

—*Pacific Stationer.*

"I see your wife has her hand in a bandage. What's the matter?"

"I set a mouse trap and put it in my coat pocket last night."

LEWIS WELCOMES SHRINERS TO ATLANTA

We have recently received a notice from "Yaarab Temple," giving particulars of the meeting of the members of the Ancient Arabic Order of the Nobles of the Mystic Shrine to be held this coming May. Now this sounds as if it might come from the Far East, it has an oriental as well as a moslem sound. It reminds one of a story that might be taken from the Arabic or Grimm's Fairy Tales, but instead of that, this meeting is to be held in Atlanta, Ga., and to all readers of GRAPHITE who belong to this order a most cordial invitation is extended by our branch manager in Atlanta, Mr. Jack Lewis, to make the Dixon office in the Fourth National Bank Building their headquarters during this convention.

We have quite a number of Shriners, as they are called, that is, members of this order, among the Dixon men and doubtless a great many among our large number of readers. We understand at this meeting it is necessary to have everything run smoothly, and we have no doubt that Mr. Lewis is preparing a special kind of lubricating graphite for this particular occasion. Of course every Shriner will have his card with him, but it will not be necessary to show it, in order to enter the Dixon office; all will be welcome, no matter from what part of the country they come, and the Noble that represents us in Atlanta will certainly give you a glad welcome.

We recently saw a statement of what constitutes a real Shriner, and as it applies so well to our Atlanta representative, we can truthfully say that this is the kind of a man you will meet when you visit our Atlanta office.

"A REAL SHRINER is a man that is clean inside and out, who neither gazes up to the rich or looks down on the poor, who can lose without squealing and who can win without bragging, who is ever considerate of women, children and old people, and who is too brave to lie, too generous to cheat, and takes his share of the world and lets others have theirs."

VALUE OF PENCIL DRAWINGS

It may interest some users of Dixon's drawing pencils to learn, according to the report of a New York newspaper, of the high prices obtained at a recent sale for some lead pencil sketches. From \$300 to \$1200 were paid for some drawings by Moritz von Schwindt, and other works of comparatively minor importance attracted unusual attention on account of the high prices paid for them.

"Look for the Spear: If you don't see it, don't take it." Funny men, these advertising men; wonder if they ever take anything they don't see.



GRAPHITE

BETTER KEEP SMILING

By PAUL DUNBAR

If the day is sort o' gloomy
An' your prospects are so blue
That you may be barely able
To see your way quite through,
It won't help your chances any,
Nor make your sight more clear,
To take counsel of your doubting
An' surrender to your fear.
Anyway, you better jest keep on smiling,—
I do.

Other people have their trouble,
Though they greet you with good cheer,
Their sorrows may be double
Those that come to you each year.
So I say, keep right on moving,
Through the darkness an' the light,
He who guides us knows the pathway,
He will always lead us right.
Anyway, you better jest keep on smiling—
I do.

S'pose your neighbor is more lucky
An' secures an easy job,
While your work so overcomes you
That your temples fairly throb,
It won't make your task the lighter
If you grumble and complain;
Learn to smile when in the shadder,
For there's sunshine after rain.
Anyway, you better jest keep on smiling—
I do.

So I'll end this little sermon
With this couplet plain an' clear—
"You can't win success in future
With the time you lose this year."
So don't stop to groan an' whimper
At the foot of every hill,
Instead, keep climbing upward
With the thought, "Of course I will."
Anyway, you better jest keep on smiling—
I do.

Skip this paragraph from the *Times of Cuba*. It is really unfit for publication, got in by mistake, and was happily discovered in time to be turned upside down in the press.

If she had to stand upon her head.
We knew she'd get at it somehow,
This poem she's already read —
Now, we'll wager a cent to a dollar
If she gets the least kind of a show,
But you bet she'll find it out somehow,
It's something she ought not to know,
If there's anything worries a woman,

DIXON'S graphite publications sent free upon request.



This Man, Above All Others, Should Know What Good Automobile Lubrication Means

He has made six tours across this continent and is better acquainted with the highways and byways of this country than any other man. The routes of his peripatetic journeys plotted over a map of the United States make it look like a fish net. Every character of roads have been traversed; good roads, bad roads, mud, sand and rocky, all of the great mountain ranges have been crossed and recrossed. This man is Mr. A. L. Westgard, Vice-President of the National Highway Association and the expert employed by the American Automobile Association, and by Uncle Sam in connection with the investigation of road conditions. On all of Mr. Westgard's trips his equipment included a supply of

DIXON'S GRAPHITE AUTOMOBILE LUBRICANTS

The following letter from this noted pathfinder should serve as a guide to good automobile lubrication:

"I want to express my appreciation of the important part played by Dixon's Graphite Automobile Lubricants in my recent motor trip to the Pacific Coast. The question of lubrication is all important with the ordinary tourist. On such a trip as ours it was the *vital* question. Bearing this in mind, we equipped ourselves liberally with Dixon's Graphite Automobile Lubricants and thanks to our foresight here, we had no lubrication troubles, even during our long run through the desert.

Yours very truly,

Ask your dealer or garage man for a can of Dixon's Graphite Transmission and Differential Grease (No. 677, or write to us for Booklet No. 190-G.

Joseph Dixon Crucible Co.

Established 1827

JERSEY CITY, N. J.

GRAPHITE

VOL. XVI.

JUNE, 1914.

No. 6.

Issued in the interest of Dixon's Graphite Productions, and for the purpose of establishing a better understanding in regard to the different forms of Graphite and their respective uses.



SOAP—GRAPHITE

Ask any man, or woman for that matter, what soap is and see if he or she can tell. Maybe you yourself don't know. In that case you better find out before you ask. There are soluble and insoluble soaps. If a soap is insoluble how can you wash anything with it? Well, you cannot. An insoluble soap is used for medicinal purposes. Lead soap, an ointment of considerable importance, is insoluble.

A soap is not primarily a substance used in cleaning. It is, according to the dictionary, "any compound formed by the union of a fatty acid with a base." The same dictionary will tell you that graphite is "a metallic, iron-black to steel-gray, sectile, flexible variety of carbon, crystallizing in the hexagonal system."

Primarily, therefore, graphite is no more a substance for lubricating purposes than soap is for cleansing purposes. Even when you buy soap for cleansing purposes you are careful to specify whether you wish it for your dog or for your hands, or for the baby's face. When you buy graphite for lubricating purposes you should be equally particular.

There is graphite and graphitic. Graphite for stove polish and graphitic for foundry facings. Probably people know less about graphite than they do about soap, which is the reason they are so willing to accept a graphite grease offered them without giving the matter any thought.

With its choice of graphites which it imports from all parts of the world, the Joseph Dixon Crucible Company uses for its celebrated graphite greases and lubricants only the pure, thin, flake graphite produced at its own mines and refined at Ticonderoga, New York. It is the most expensive graphite to the Dixon Company, but it is the only graphite that should be used for lubricating fine and costly bearings of machinery.

No matter how much time or skill is put on the finish of a bearing, a magnifying glass will show you it is still very much like a coarse file. The thin, tough flakes of Ticonderoga graphite form on such surfaces a veneer-like coating of graphite of marvelous smoothness, toughness and endurance. Such a coating prevents metal-to-metal contact, therefore prevents heating and friction and adds greater value to the oils or greases used.

"STOVE POLISH" FINISH

There was no finish that appeared brighter and cleaner or neater and nicer to the eyes of our grandmothers than the Dixon Stove Polish finish on their kitchen stoves.

Today stove polish finished satin ribbon is one of the novelties of the season. This does not indicate that it has been produced by Dixon's Stove Polish, but it means that it closely resembles the polish seen on a freshly blackened stove produced by Dixon's celebrated Carburet of Iron Stove Polish.

Its friends claim for this new stove polish ribbon many advantages over others, among which are these: That it will shed the dust to a remarkable degree and will not spot with water.

This stove polish ribbon is becoming popular in millinery and is said to be appreciated by automobilists on account of its dust-shedding qualities. The ribbon costs a little more than other ribbons, as it is treated by a special process to produce the peculiar lustre of the stove polish, and this work must be paid for.

For several years the up-to-date autoist has polished his wheel rims with Dixon's Graphite (from which stove polish is made); he has lubricated his engine and all of his bearings with Dixon's Graphite and because of better results he has stopped using talcum on the inner tubes of his tires because Dixon's Graphite gave better results, and now his lady-love, his wife, his sister, his cousin and his aunt, if they are up-to-date, will wear graphite-polished ribbons on their hats. "The world do move."

A HINT TO LINOTYPE OPERATORS

In some places graphite is used where it would be difficult or impossible to find a substitute. One of these places is about the Linotype machine. A Linotype operator recently procured a formula of a preparation to be used for the cleaning of matrices, but after experimenting with the solution he discovered to his sorrow that the fluid had eaten into the delicate surface of the matrices, which of course caused them to "pick up" or burr. Dixon's No. 635 Dry Graphite and also Dixon's Oiled Graphite have been used for a great number of years by all old and experienced Linotype operators and machinists. It was discovered long ago that either of these grades of graphite would not only clean matrices without pitting them, but would also, when thoroughly applied, permit them to slide easily and perfectly into position.

DIXON'S graphite publications sent free upon request.

ESTABLISHED 1827



INCORPORATED 1868

**JOSEPH DIXON CRUCIBLE CO.**

JERSEY CITY, N. J., U. S. A.

**Miners, Importers and Manufacturers of Graphite,
Plumbago, Black Lead.**

OFFICERS:*President—GEORGE T. SMITH**Vice President—GEORGE E. LONG**Secretary—HARRY DAILEY**Treasurer—J. H. SCHERMERHORN**Ass't Sec'y & Ass't Treas.—ALBERT NORRIS***DIRECTORS:****GEORGE T. SMITH****GEORGE E. LONG****WILLIAM MURRAY****EDWARD L. YOUNG****WILLIAM G. BUMSTED****HARRY DAILEY****J. H. SCHERMERHORN****OFFICES AND SALESROOMS:****NEW YORK SALESROOM, 68 Reade Street.****PHILADELPHIA SALESROOM, 1020 Arch Street.****SAN FRANCISCO SALESROOM, 155 Second Street.****CHICAGO OFFICE, 1324 Monadnock Block.****BOSTON OFFICE, 347 John Hancock Building.****PITTSBURGH OFFICE, Wabash Terminal Building.****ST. LOUIS OFFICE, 501 Victoria Building.****BALTIMORE OFFICE, 1005 Union Trust Building.****BUFFALO OFFICE, 72 Erie County Savings Bank Building.****ATLANTA OFFICE, Fourth National Bank Building.****EUROPEAN AGENTS****Graphite Products, Ltd., 218-220 Queen's Road, Battersea, London.****SOUTH AMERICAN AGENT,****Alfredo J. Eichler, 666 Calle Cangallo, Buenos Aires, Argentine.****CUBAN AGENTS,****For all Products Except Dixon's American Graphite Pencils****Croft & Prentiss, Room 424 Lonja del Comercio, Havana.****For Dixon's American Graphite Pencils.****Harvey & Harvey, Mercaderes 4 bajos, Havana, Cuba.****ANNUAL MEETING OF THE JOSEPH DIXON
CRUCIBLE COMPANY**

At the annual meeting of the stockholders of the Joseph Dixon Crucible Company, held at the company's main office in Jersey City, N. J., on Monday, April 20, 1914, the retiring Board of Directors, consisting of Geo. T. Smith, William Murray, George E. Long, Edward L. Young, William G. Bumsted, J. H. Schermerhorn and Harry Dailey, were unanimously re-elected.

The meeting was attended by a large number of stockholders who expressed satisfaction with the present management and recorded the largest vote ever represented at an annual election, 9628 out of a possible 10,000 shares being represented.

The officers of the company, consisting of Geo. T. Smith, President; George E. Long, Vice President; J. H. Schermerhorn, Treasurer; Harry Dailey, Secretary, and Albert Norris, Ass't Treas. and Ass't Sec'y, were also re-elected.

LAYING UP THE POWER PLANT

During the hot summer months it is the practice of some power plants, especially small isolated plants, to shut down. Some good advise on this subject is offered to the readers of *Practical Engineer* by J. C. Hawkins, who confines his remarks more especially to the preservation of the machinery and other metal equipment, during the period of laying up the plant.

The following paragraphs are excerpts concerning the use of graphite in a certain plant, and while the name Dixon's is not mentioned, the engineer who reads this will find it better to make a mental note of the fact that when the time comes for re-opening, his entire plant will have benefited if, in place of some other kind of graphite he has made use of the old, reliable Dixon's Ticonderoga Flake Graphite.

"When the heating period is over all the steam lines and radiators are drained. This is partly a hot water system which is also drained and dried out by allowing air to circulate through it. The return pumps are taken apart and the valves, valve seats, and cylinder walls are given a coat of graphite and cylinder oil, and the heads and covers are replaced with new gaskets, ready for operation. All piston rods, valve stems and other finished parts are given a coating of grease to prevent rusting, and all stuffing boxes, including the water piston, are repacked. The traps and tanks are cleaned out and all valves repacked. When laid up in this way the system is ready to be started up in a few minutes if necessary.

"In overhauling the engines and pumps, the cylinder heads and valve bonnets are taken off and the valves and cylinder given a coating of graphite and oil. Sometimes the pistons are taken out for examination and repair of the rings, but if the records show that there is little leakage they are not taken out. In order to dope the full length of the cylinder the crank is placed on the crank end center, and the cylinder walls painted. Then the engine is turned over two or three times, more graphite being added, which is worked into the rings and to the walls under the piston when on the center.

"The metallic packings on the piston rods and valve stems are not removed unless repairs are necessary, as it is a difficult matter to re-assemble them exactly as they were on the rod before, and they are liable to leak if changed; but a generous supply of graphite is worked in along the rod to prevent rusting.

"The boiler feed pumps, stoker engines, steam driven fire pump, vacuum pumps, and house pumps are opened for inspection and repairs, and the wearing surfaces are doped with graphite and oil."

THE REAL character of a man is found in his amusements; no man is a hypocrite in his pleasure.

—DR. SAMUEL JONHSON.



**RIGGS THEATER AND OFFICE BUILDING,
WASHINGTON, D. C.**

The Riggs Theater and Office Building, located at 15th and G Streets, N. W., Washington, D. C., is the subject of a detailed though interesting article by Mr. W. A. Ehlers in the *Engineering News*, and it is through the courtesy of that publication that the above illustration of the Riggs Building is reproduced. Mr. Ehlers was associated as superintending engineer with Mr. J. H. De Sibour, and personally superintended the work of construction on the Riggs Building and other structures in Washington planned by that well known architect.

The Riggs Theater and Office Building has a frontage of 116 by 178 feet, and is eight stories high. The theater section occupies about two-thirds of the floor area and has an entrance on 15th Street, with all exits on G Street. The auditorium extends to the level of the sixth floor of the office section and the stage portion occupies the entire height of the building. On the first floor of the office section, in addition to the theater entrance, are a large café, two general stores and an entrance to the offices. The general office occupies the whole of the office section above the first floor and three floors over the theater auditorium. In the basement is an elaborate Turkish bath with a swimming pool, a large barber shop, a theater promenade and various theater facilities like trap, wardrobe, and animal rooms, a green room and various quarters for musicians, porters, ushers, etc. The boiler, mechanical and engine rooms are in the sub-basement.

The general contractors for the work of construction on the Riggs Building were Wells Bros. Company. The American Bridge Company furnished the 1800 to 2000 tons of steel shapes, to which were given a shop coat of Dixon's Silica-Graphite Paint. Dixon's Paint was also used for the field coat on the steel frame work of the Riggs Building. The use of Dixon's Paint for the protection of structural steel in the Capitol City is not confined to theater buildings, but is used upon school, hospital, store and residential structures, power plants, and even the American League Baseball Grandstand, the home of the great Walter Johnson, is protected by Dixon's Silica-Graphite Paint.

TWO COMMON ERRORS

Nearly everyone thinks that oil will make anything slippery, and that it will decrease friction between any two sliding surfaces. This is not so; for oil poured on wood will actually increase friction, and it has been found generally that anything used as a lubricant that is absorbed by the thing lubricated will have the opposite effect from the desired one. Wood friction will be decreased by soap or graphite, because these are not absorbed by wood.

Another thing that is a popular misconception is the ordinary meaning of the word *suction*. There is no such thing as suction used in this way. A so-called suction pump, for instance, does not suck up water: the water is pushed up by the air pressure on the water in the well. All one does in the act of pumping is to take the air from the top of the water in the pipe, and thus remove the air pressure from above it—and of course the unbalanced air pressure on the outside shoves the water up. The same thing takes place when a girl sucks soda water through a straw. She merely removes the air, and the outside pressure does the work. When we "take in a breath" we merely decrease the pressure in the lungs by expanding them to a bigger volume with the proper muscles, and the unbalanced pressure on the outside forces air into the lungs. So we do not suck in our breath; it is forced in from outside.

—*Sunday Magazine*.

THE DRIEST place in the world is said to be in Egypt between the two lower falls of the Nile. Rain was never known to fall and the inhabitants do not believe travelers who say that water can fall from the sky. There are still thousands of people who have no idea of a lubricant other than an oil or a grease. They have no more of an idea of a solid lubricant than our Egyptian has of water falling from the sky and yet a prominent engineer once said: "The more solid the lubricant that can be used in any place, the better the lubrication;" and Dixon's Ticonderoga Graphite is a solid flake graphite of marvelous smoothness, toughness and endurance. It greatly increases the life and lubricating value of any oil, tallow or grease to which it is added.

SAM MAYER

Late Manager of the Chicago Branch of the Joseph Dixon Crucible Company

Sam Mayer died on the morning of Monday, April 27, 1914, an event which means much more than the passing of an individual. It represents a loss to the commercial world and to hosts of friends and acquaintances. One who possessed ability and brains which made him a conspicuous factor in all affairs pertaining to the upbuilding and cementing of friendships in business and private life.

Mr. Mayer was born in San Francisco, California, April 28, 1851. After a brief experience in the banking business in that city he visited New York and took a position with Cook & Cobb, prominent manufacturers of stationer's specialties, and by his successful work became the head traveler of that house, thus attracting the attention of the Dixon Company, who, in January 1897, needed a good man to take the territory to relieve Mr. John M. Ready, advanced to the management of the Chicago branch. Later, when Mr. Ready was transferred to the New York management, Mr. Mayer was his logical successor in Chicago, where his efforts to build a bigger and better business for his company earned for him the sobriquet of the best advertised pencil man in the West, if not in the country. He certainly was an expert on lead pencils and to him "Dixon" represented the last word in quality.

In the Stationer's Association his influence will be felt for a long time. He was one of the organizers of the National Association and his presence, with the brilliant ability to entertain and his great personal attraction and magnetism, were important factors in promoting the success of the gatherings.

Mr. Mayer's beautiful apartments in North State Street were crowded to overflowing with photographs and paintings of theatrical people, most of them autographed. His collection of programs and dramatic reviews and clippings being considered the most valuable in the country, if not in existence. Some clippings dating back to Shakespeare's time. His taste also ran into exquisitely bound books and curios, carvings and art objects. Those who were privileged to enter his home enjoyed a treat in the exhibition of the treasures.

As to the lovable ness of his life the following tribute was sent us from his office:

"Mr. Mayer's big-heartedness was not always covered up by the dignity which he observed and maintained in his office, and

no one individual knows all of the manifestations of his thoughtfulness. There were countless little things that he took delight in doing for others. His employés' interests were his interests, and his kindness to them led them to go to him when advice was needed even in personal affairs.

"There was a time when a member of the family of one of the employés lost his position through an unfortunate move, and no friend could have been more loyal to the family of that employé, or taken a greater interest throughout the ordeal than Mr. Mayer.

"Last year one of the boys from the Chicago Office, a promising lad of sixteen, lost his life by drowning while on his vacation, and this was a hard blow to Mr. Mayer; it affected him as if it had been his own son. As soon as word was received, Mr. Mayer took practical charge of the funeral, and would have borne the entire expense, beside giving aid to the family, had not Mr. Dudley A. Johnson insisted on sharing it.

"Another member of the Chicago Office, who happened to mention the boarding house life, was quickly presented with a neat little percolator, a pound of the best coffee, an ordinary table spoon for measuring it, an alcohol stove with a

bottle of fuel, and even the cream for the first breakfast. His joy was never more apparent than when he was doing something for someone else.

"Mr. Mayer's criticism was keen, but he invariably drew the best out of his employés by his appreciation of their efforts.

"His one regret was that he had never married, and the children of his best friends were never forgotten by him at the holiday season, or at any other time, for he loved them.

"Another evidence of Mr. Mayer's kindness was his interest in an old man of the street who earned his living by selling gum near one of the theaters. When the cold weather came on and "Joe," as he was called, had not sufficient clothing to protect him from the cold, Mr. Mayer took him out and supplied him with the necessities, and "Joe" knew where to come when he was in need of help."

To some of our readers Mr. Mayer was unknown, but we present this all too brief tribute to him as a leading spirit in all that went to make up good fellowship among men, past-master of crisp, pointed pithy expression, clear and concise in business matters, a soft heart and hard head; combinations that enabled him to establish close and firm relations with customers and hold their friendship and respect. It is difficult to find other to fill such vacancies.





DUDLEY A. JOHNSON

Chicago Branch Manager Joseph Dixon Crucible Company

Mr. Dudley A. Johnson succeeds the late Sam Mayer as Chicago Branch Manager of the Joseph Dixon Crucible Company.

Mr. D. A. Johnson has for a number of years been an assistant to Mr. Mayer at Chicago, and he now comes to the full branch management of the Chicago Office, fully equipped by the experience of many years' acquaintance with the Dixon line and the Dixon customers.

When he came with the Dixon Company in 1898, he brought with him experience in the lead pencil and stationery business from P. F. Pettibone & Company and the Holyoke Envelope Company. During the first few years after coming with the Dixon Company, he had charge of the lead pencil department and the school work. Later on Mr. Johnson assumed charge of the crucible and black lead department of the Dixon Company in the Chicago territory and is, therefore, fully equipped to ably represent the Dixon Company as its branch manager in the Chicago territory.

In 1903 the Dixon Company published in its October GRAPHITE a number of readings of character made from photographs by the well known phrenologists of New York City, Messrs. Fowler & Wells. The reading made of Mr. Johnson was fully warranted, as has been proven through the many years that have elapsed since that time. It was as follows:

"This gentleman is a clear-headed, expert business man who can see further than many, and who does not need so many details to guide him in forming an opinion concerning his work and that of others. He is what is sometimes called "level headed," and is quickly impressed with the importance or the appropriateness of things."

"He possesses an excellent memory of what he has seen or heard; even years after he has been to a place he can recall it, or if he meets a man whom he did business with years previously, he can recall almost every item of his conversation.

"He is quite artistic in his tastes, has an eye for beauty, style and culture.

"He could succeed where he had to give judgment upon the best textures, superior fabrics or ornamentation of any kind. He could select artistic wall papers, carpets, magazine covers and decorations of various kinds on a large scale, and compare their cost and beauty."

NEW YORK WHOLESALERS KICK

The New York wholesalers have lately been making complaint because of the revival of the practice of some of the out-of-town stores of asking the houses they buy from to purchase tickets for benevolent and social functions of various organizations of employés.

These tickets usually range fairly high in price, and it is seldom that the wholesaler can escape without contributing at least \$5.00.

While it is not thought that the wholesaler would actually lose business by refusing to accept this bait, it is maintained that the executives of many of the houses buy the tickets only to avoid the possibility of bad feeling on the part of their customers. It is intimated that the stores get the worst of the deal, however, for it stands to reason that few local houses are going to be genuinely interested in the social side of some store in the Far West or South. As a result the cost of the tickets is either made up on the selling price of goods or the wholesaler gets "square" for the hold-up by forgetting stores which do this sort of a thing when there is a chance for the wholesaler to offer merchandise that represents money-making bargains to the retailers.

Complaint is also heard of the many requests that come from customers for money contributions for churches or children's homes or something on the benevolent order.

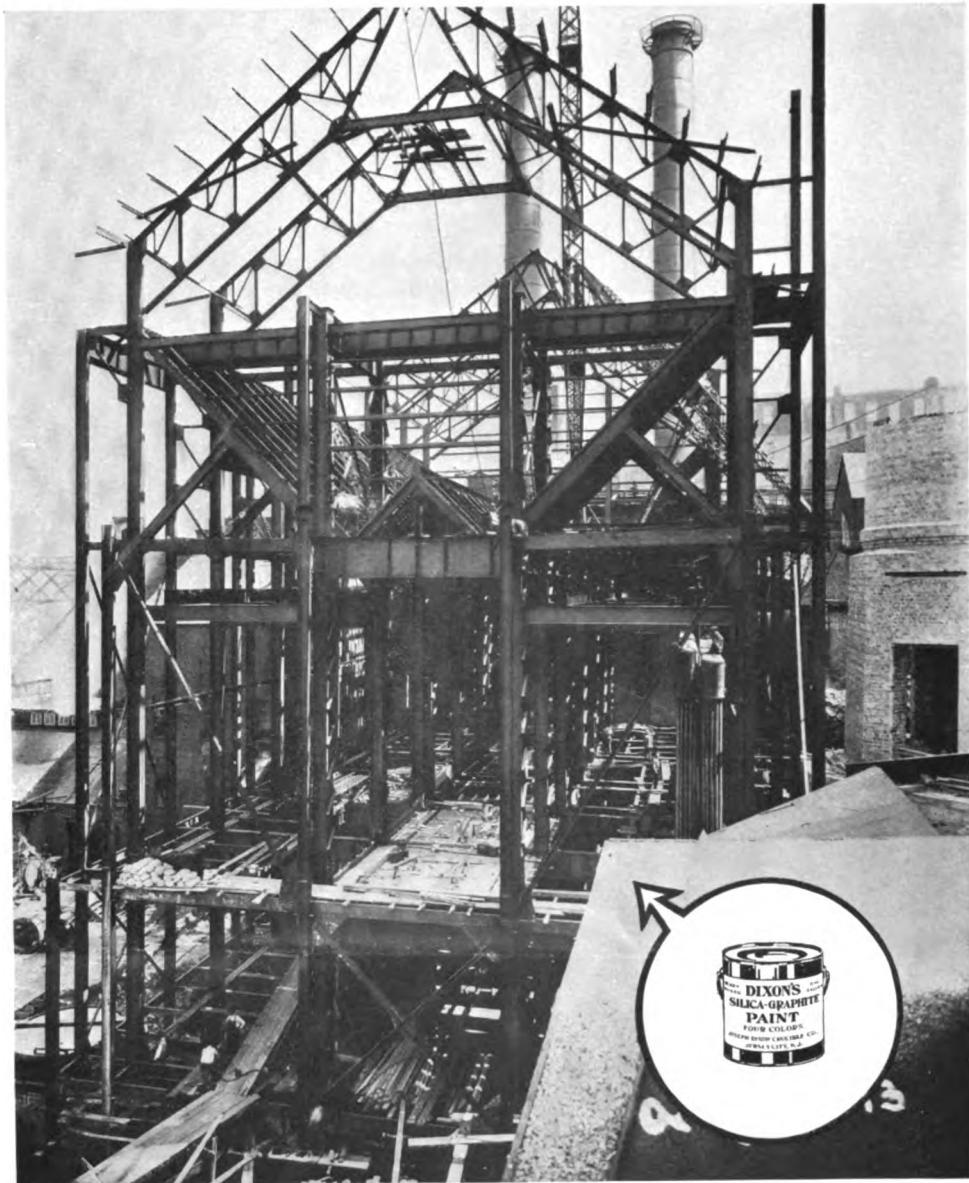
Every wholesale dealer in New York has about as many calls upon his purse as he can stand from churches, benevolent organizations or social affairs of his own town or section. If he were a multi-millionaire several times over he would not be able to meet all the demands that might come to him, however much he would like to, and in all probability he does give even closer to the limit than his poorer and less known fellow men, simply because he cannot well avoid it. It is one of the burdens upon the successful and well known business man.

"PLENTY OF ROOM UP FRONT"

So cries the trolley conductor and nine times out of ten you will find it true. Or if you yourself will take the initiative and work your way through the standing and grumbling crowd you will more than likely find not only a seat, but comfort as well.

Years ago there were many who heeded our cry and many others who of their own accord "went up front" and found Dixon's Ticonderoga Flake Graphite waiting their use. Today some of those men who pushed forward for better lubrication, occupy high positions in the mechanical world. The man who makes his machine run better is the man who is noticed. It is the speeder who gets arrested, not the slow coach, unless he gets in the way and stops progress, and it is Dixon's Flake Graphite that helps to increase speed and to make things run smoothly without wear.

A DIXON customer wrote the other day, that the reason he liked to buy Dixon's Pure Flake Lubricating Graphite, was because when he bought Dixon's Graphite he was always sure of getting the same grade every time. We always give most careful attention to maintaining a uniform grade and quality in Dixon Graphites.



**POWER HOUSE, ROCHESTER RAILWAY AND
LIGHT COMPANY, ROCHESTER, N. Y.**

The association of graphite with power plants suggests ideas of smoothness, less loss of power, economy. Engineers gratefully acknowledge that their satisfaction is often due to the use of Dixon's Flake Graphite because more engine power is available.

Many as are the benefits to be derived from Dixon's Graphite Lubricants, there is still another graphite product which affords a permanency so predominant that engineers and superintendents of power plants are quick to make use of it for boiler fronts, smokestacks, and other metal work found in and about power plants, as soon as they are aware of its economies.

Dixon's Silica-Graphite Paint is a product which for half a century has constantly met with increasing favor from those who seek a protective paint for metal work which will *last longer*.

The illustration shown above is the superstructure of the Rochester Railway and Light Company's power plant. Two coats of Dixon's Silica-Graphite Paint were used on the 900 tons of structural steel by the Lackawanna Bridge Company, who supplied the steel work.

SOUTH AMERICA

We learn through the United States Bureau of Foreign and Domestic Commerce that the commercial and social relations between the United States and South American countries have rapidly grown closer in the last few years.

South America has potential resources for sustaining in comfort and plenty several hundred million people.

American business men, therefore, look wisely to the future in laying plans to become established in South American markets in order to expand as the country there grows.

The United States Bureau of Foreign and Domestic Commerce strongly advocates development of a mutual beneficial interchange of trade and business, economical and professional.

INTEREST IN ART

Mabel had gone to the art exhibit. Not that she cared for pictures; but everyone went.

A friend saw her and told another friend. Friend number two met her a few days later.

"Why, hello, Mabel, I'm awfully glad to see you. I hear you are interested in art."

"Me? Art who?"—*Current Opinion*.

THE COUNTRY BOY'S CREED

We wonder how many readers of GRAPHITE were born and brought up on a farm. We were reminded of this from the following article written by Edwin Osgood Grover, the president of the Prang Educational Company, one of the largest dealers and manufacturers of school supplies in the United States, and is as follows:

THE COUNTRY BOY'S CREED

I believe that the country, which God made, is more beautiful than the city, which man made; that life out-of-doors and in touch with the earth is the natural life of man. I believe that work is work wherever we find it, but that work with Nature is more inspiring than work with the most intricate machinery. I believe that the dignity of labor depends not on what you do, but on how you do it; that opportunity comes to a boy on the farm as often as to a boy in the city; that life is larger and freer and happier on the farm than in town; that my success depends not upon my location, but upon myself—not upon my dreams, but upon what I actually do—not upon luck, but upon pluck. I believe in working when you work, and in playing when you play, and in giving and demanding a square deal in every act of life.—**EDWIN OSGOOD GROVER.**

This recalls to our mind our boyhood experiences of many years ago; and we have no doubt to many of our readers this will recall some of the incidents in their boyhood days as well. We found work on the farm began in the early spring and lasted until late in the fall, of course there was more or less work to be done in the winter, but it was generally in-door work.

We remember particularly the weeding of the fruit and vegetable gardens. It seemed to us that the latter was particularly large; and while the farm was not large according to western ideas, in New England 150 acres was considered a good sized one. There was a good deal of live stock and that called for a considerable amount of vegetable food, such as squashes, pumpkins, parsnips, carrots, etc. Then we remember a fruit orchard in which there were one hundred pear trees, and this called for careful weeding and it seemed that the weeds grew larger and stronger where there was the greatest amount of ground to be gone over, and every day after school there was just so much to be weeded to complete our daily stunt; then another thing we look back upon was the daily task of filling the wood box beside the kitchen stove. This was supposed to be kept filled, brought from the brush heap, and the wood piled up in back of the stove, and we remember distinctly the temptation to go after the pond lillies or to go up in the pine woods back of the house and see if anything had been caught in our snares; it was too great a temptation to be overcome, consequently the wood box would suffer. The result was that after our return we had to make a journey in the dark to the wood pile and do the work that had been left undone in the day time.

EARL COOPER, World's Champion Automobile Driver for 1913, says that he considers the Dixon Graphite Lubricants as necessary as gasoline for his Stutz car.

DIXON's graphite publications sent free upon request.

$$(d=0.03361 \text{ m}^2)$$

The above formula will enable you to determine the force of the bump you will get when you go joy riding, or are speeding up and something goes wrong and you go out and hit the ground.

Mr. S. F. Kennedy in the *Scientific American* tells us of the danger incident to different rates of speed, and to make it impressive upon us furnishing us with a formula by means of which we are able to determine the given height from the ground, a fall from which will equal the force of our impact when hurled from a moving vehicle.

In other words, a direct impact in a wreck at a speed of forty miles per hour, is the same as one would sustain by falling 53.78 feet. A striking impression may be afforded any person, by standing on the top of any structure 53.78 feet high, and considering what the effect would be if he were to jump off; and yet, his impact at forty miles per hour would be the same, and going at forty miles an hour is not considered excessive speed.

It may be observed from the formula from which we make our computations ($d=0.03361 \text{ m}^2$), that the danger increases as the square of the number of miles per hour.

d =the height of the fall;

m =the miles per hour one is driving.

Sixty miles per hour (a common boast of "Joy Riders") would be equivalent to a fall of 121 feet.

The danger increases rapidly, especially above thirty miles per hour.

STEVENS BILL ENDORSED AT MASS MEETING OF NEW YORK RETAILERS

RESOLUTIONS UNANIMOUSLY ADOPTED AT THE MASS MEETING
OF INDEPENDENT RETAIL MERCHANTS OF GREATER NEW
YORK AND THE METROPOLITAN DISTRICT, APRIL 24, 1914

Whereas,—The habit of price cutting on standardized and trade marked articles of merchandise has assumed such vicious proportions that it now threatens the business existence of retailers of small or moderate capital, and

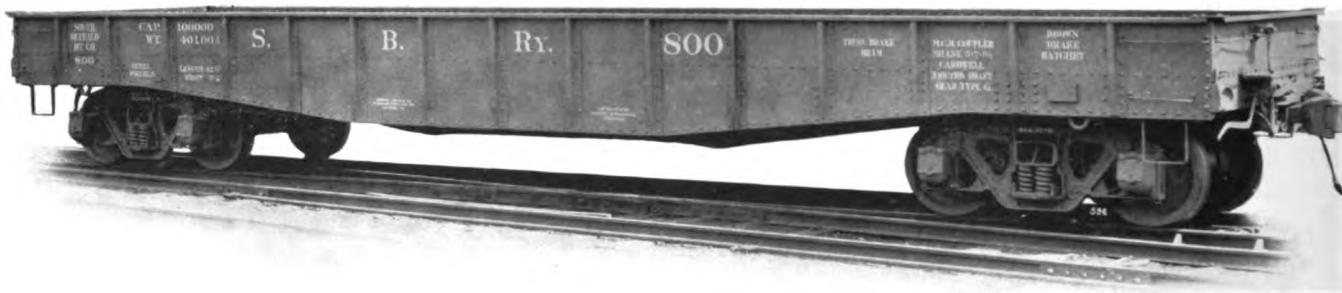
Whereas,—the consuming public is being plundered and outraged by a scheme of business which depends upon deception rather than an exchange of real and recognized values, and

Whereas,—present conditions tend towards an imminent monopoly of the channels of distribution—a monopoly that would be vaster and more potent for evil than any trust hitherto conceived; therefore, be it

Resolved,—That we, the Independent Retail Merchants of Greater New York and the Metropolitan District, sound an earnest note of warning to Congress and to the people at large, and counsel immediate action against present and impending attacks on the integrity of American commerce, and be it further

Resolved,—That we solemnly endorse and promise heartily to support the Stevens Bill H. R. 13305, now pending in Congress, which promises honesty in merchandising and equal opportunity to all business men and consumers alike, and be it further

Resolved,—That the secretary be instructed to send a copy to the President, to every member of the United States Senate and House of Representatives, to the Governors and every member of the State Legislatures of New York and New Jersey.



STEEL CARS OF THE SOUTH BUFFALO RAILWAY COMPANY

The slogan "Safety First" may lose some of its popularity, if not its place, in railroad practice, if the present wave of economy continues. Economy has become a rigid principle and in the painting of steel cars, as in the painting of bridges, viaducts, terminals, water tanks, fences and other railroad property, Dixon's Silica-Graphite Paint is used because of its ability to give *longer service*. *Longer service* means that the necessity for repainting becomes less frequent; that large labor costs are decreased; that less paint and brushes are used and that a "stay satisfactory" job has been done. It was this very kind of economy which actuated the South Buffalo Railway Company to have 3000 gallons of Dixon's Silica-Graphite Paint used upon over 300 new steel freight cars. A low side, flat bottom gondola, one of the five types of Standard Steel Car Company's construction, is pictured above and is of the type which made up nearly one-half of the South Buffalo Company's order.

SAVING THE BLIND

Mr. Joseph H. Choate, president of the New York Association for the Blind, in a letter to the editor of the *New York Times*, which letter was typed by a blind stenographer, tells us that this association started seven years ago with a debt of \$400 and a list of only 500 living blind people, and no home.

Today the association has listed 10,000 names and has three model equipped buildings, a workshop for blind men, a training station, an information bureau, a salesroom for the blind, and a vacation home for them.

It fills a unique place in the community as a pioneer in sight-saving, mind-saving, life-saving, and money-saving for the blind.

Last year \$23,213 was received from the sale of products manufactured by the blind workers and pupils; in the same period there was paid out about \$27,000 to the blind in wages, relief, and for their work.

Some of the pupils who have become independent through the teachings of the association are now themselves contributing to the support of the work.

Hampered with a mortgage of \$35,000 and lacking money for its running expenses, the association's activities must be curtailed or stopped unless \$300,000 is immediately raised. Fifty-one thousand dollars of this sum have already been pledged, conditional on the remainder being speedily found.

For this purpose a committee of 100 is in process of formation to solicit funds through the press and through individual endeavor. Contributions may be sent to John Seely Ward, treasurer of the Lighthouse Fund Committee, at the Lighthouse, 111 East Fifty-ninth Street.

DIXON'S BOILER GRAPHITE GIVES ENTIRE SATISFACTION

The following letter from the chief engineer of Schorsch & Company, 133d Street and Brook Avenue, New York City, is another of the great number of letters we receive from these officials with such prominent concerns.

NEW YORK, N. Y., January 19, 1914.

Joseph Dixon Crucible Company,

Jersey City, N. J.

GENTLEMEN:—I wish to tell you that I used Dixon's Boiler Graphite No. 2 with good success, removing scale from two Dillon horizontal tubular boilers and it proved to be equally as good as scale preventative. Am now using same as a scale preventative in two Heine boilers, and it is giving entire satisfaction.

Yours truly,

(Signed) J. F. HOWEY,
Chief Engineer.

NATIONAL FOREIGN TRADE CONVENTION

The National Foreign Trade Convention, which will meet in Washington, D. C., on the 27th and 28th of May, promises to be a unique gathering both in its composition and the range of topics which will be presented for discussion.

Readers of GRAPHITE who desire to have the particulars of this convention, will please address Mr. E. V. Douglass, Secretary of the Association at 66 Broadway, New York.

IT IS STATED that there are over a million of automobile registrations in the United States and it is now said there are in use in the United States 256,350 motorboats, representing an investment of over \$250,000,000. Practically half of all the motorboats, or 155,800 are to be found in the Atlantic states, where there are four to each 1,000 of population. In the Pacific states there are 50,300 motorboats, or twelve to each 1,000 of population. This big difference in the number per capita between the Atlantic and Pacific states is probably due to the more favorable conditions for pleasure boating along the Pacific Coast. So says *Popular Mechanics*.

A FUTURE ZOOLOGIST

"Now," asked the teacher, "who can tell me what an oyster is?"

Silence for a moment, while small brows were knit in strained effort at remembrance. Then little Tommy's facial muscles relaxed and eagerly he raised his hand.

"I know!" he triumphantly announced. "An oyster is a fish built like a nut."—*Railroad Men.*

ABOUT RETURNED GOODS

There has been considerable discussion on the subject of returned goods.

Sooner or later manufacturers will have to adopt some precise attitude toward returned goods, says Mr. Edgar Pace-maker in *Printers' Ink*. In returning goods the dealer may or may not advise you in advance of his action. His action may even be coupled with a threat not to place further orders unless the goods are taken off his hands, with full allowance of credit.

To complicate matters, the goods may be in a condition rendering them without value by deterioration from improper storage or handling, or rendered obsolete by improved models.

Manufacturers who accept such returns without question base their policy on

- (a) Trade custom in their lines;
- (b) Sales made with the guarantee of resale;
- (c) Elimination of price-cutting on slow-moving lines.

Makers who refuse absolutely to accept such returns base their policy on

- (a) Once accepted, sales are final except for defect;
- (b) Refusal to enter into any semi-consignment arrangement;
- (c) The belief that the maker is responsible for quality, and that the buyer is judge of the market.

There is a large third class who treat each case in its relation to their distribution and the probable effect on sales which acceptance or refusal would involve.

Much has been discussed *pro* and *con* on this subject, but that which pleases us the most at this moment is the statement made by one dealer that he has never asked to have goods returned as he considers that such a request reflects on the business ability of a dealer.

An up-to-date, wide-aware dealer can easily find a way, this merchant says, to dispose of shelf-worn or obsolete or out-of-date goods. He believes that the only time that goods should be returned is when they are not up to sample or to old-time quality.

One phase of this problem which the Dixon Company has been up against several times, is the request to return goods when the goods were not bought direct of the Dixon Company, but through some jobber who evidently had refused to have them returned and the Dixon Company was, therefore, asked to accept back the goods at full catalogue price.

"SPENDTHRIFT OR MISER"

A Reply

The following is a communication that we have received in reply to an article under the above heading in GRAPHITE for May. We are very happy indeed to have drawn such an excellent reply, which we heartily commend to readers of GRAPHITE:

May 2, 1914.

Editor, GRAPHITE,

Joseph Dixon Crucible Company,

Jersey City, N. J.

DEAR SIR:—On page 3729 of GRAPHITE, I read under the heading "Spendthrift or Miser," the experience of an entertainer for a company whose name is not given.

As a man who was some fifteen years on the road selling goods and since then has been a purchasing agent, buying the same class of material he used to sell, I would say that if entertainment is to be extended at all it must be in a generous way. In fact some of the larger companies make it a point once a year to engage a steamboat or a convoy of automobiles and take customers for a day's outing, giving dinner and supper and returning at such time of the day that the full moon may bring recollections of hours pleasantly spent.

On the other hand, I think the loyal purchasing agent will make it a rule to refuse all gifts, whether they be only cigars or invitations to lunch, in that business today is conducted more on the quality of the goods and not alone on price or as to a salesman's treatment of the buyer.

It is only men of narrow minds and probably poorly paid (which means they are working for niggardly concerns) who accept presents, go to lunch and make themselves marked as ones who expect entertainment.

There are certain lines of business, I am told, where those who pass on the material are paid such miserable salaries that there is "adhesion" from the upper officer down to the man who actually writes out the order.

To my mind the assertive man, who is loyal to his concern and shows he cannot be swayed by personality or gifts, stands in the right so long as he knows he is right in his own eyes, and because of his being faithful need have no fear about another employer taking him up.

As an example I embody in this letter a copy of a communication I received from a young man:

DEAR MR.——:—It is eight weeks today since I was appointed to my present position and acting on your advice, I have worked early and late and have even come down after supper and put in time until eleven o'clock, much of which should have been done by fellow clerks, but as I saw the work in the pay roll department was going behind, I recognized that if it was done, credit would be given me because of bringing the work to completion.

I need not add that I have been looked upon with disfavor by some of those who skip at 5.30 P. M., but let me tell you what happened:

This morning the treasurer called me into his office and said: "Mr. Blank, you have been under Mr. Rembrandt, but from now on he will be under you."

I am glad that I took up the work in the way that you suggested, because I can see now that it was not only that I have been careful, but likewise done a lot of work which was not assigned me, hence my promotion,—not alone in advancement of position, but in better pay. Sincerely,

HIRAM.

THE MISSING ENGINE

On the third day of his Aunt Jane's visit to the city, Motorton took her for a ride in his high-power runabout. They had proceeded only a mile or so when "Darn the luck!" exclaimed Motorton.

"Goodness! What's wrong?" said Aunt Jane.

"Engine's missing," tersely replied Motorton.

"Dear me!" said Aunt Jane. "I do hope it's been found by an honest person. Where do you suppose we dropped it?"

—Lippincott's.

CUTTING PRICES

The idea seems to be growing that it is the foolish man who cuts prices on well known and staple goods. Several dealers who formerly cut prices on Dixon's Automobile Lubricants because they cut prices on all goods, have of their own free will either told us direct or have written to us, that they have seen the folly of their ways.

One dealer said that he had been selling cans of Dixon's Graphite Grease at \$1.10 that he was supposed to get \$1.50 for. As the demand for this grease increased, the thought came to him, "Why should I give up that forty cents if I can get it?" He gave instructions to his salesmen thereafter to charge \$1.50, and if they could not get it lose the sale. To his surprise he had no difficulty in getting the \$1.50 price. Later he constituted himself a committee of one to call on one or two of his neighbors who were cutting prices and asked us if we would see those people ourselves and get them to lift the price to \$1.50, as he did not like to have any one come to his place and say they could buy the Dixon goods forty cents less at a neighbor's, and he felt confident that the neighbor could get the \$1.50 price.

Another prominent dealer in New York City, who when asked why they did not maintain the Dixon prices which were only fair and which gave the dealer not more than a good profit, said: "We cannot and we will not maintain the Dixon prices, and if you persist we will not catalogue your products." We replied that we would rather he would not catalogue them at a cut price. The goods were omitted from their catalogue, but during 1913 their purchases of the Dixon products increased because of the increased demand, and in the beginning of 1914 they catalogued the Dixon goods at the Dixon prices. They said: "At the Dixon prices we are making good money out of your products, so why not sell them at the prices when we can get that price all right? Furthermore, we have instructed all of our salesmen to push the Dixon greases and to push them because we are making money. Why push an article on which we are forced to cut the price?"

For years the Dixon Company has discouraged the cutting of prices at any time and at all times. We do not find it expedient to meet the prices of our competitors. The Dixon Company claims special superiority for its goods either in quality or in packing or in some way. The prices made by the Dixon Company are fair, honest prices, carrying with them only a legitimate profit.

Therefore, when a Dixon salesman writes asking for permission to cut prices on any lines because some competitor has cut prices, the Dixon salesman is advised at once to stick to his price—to lose the sale rather than meet competition at cut prices.

BOILER GRAPHITE AND THE INSPECTOR

We received a letter from an engineer in which he expresses doubt as to whether he should make use of graphite in his boiler for the prevention of scale. He writes us that a boiler inspector said he was not permitted to recommend it.

About the same time we got a letter from a boiler inspector in which he said:

"In my position I am often requested to recommend boiler compounds. Would like very much to make arrangement

with you for a commission in graphite and in each case will name the buyer, but would not care to have my name or name of company in transaction for reasons stated in enclosed letter."

The letter which was enclosed was one addressed to an engineer and is as follows:

"In reference to reports submitted on the various boilers and to further prevent pitting and corrosion, it has been my experience that a treatment of graphite will form a coating on the metal and the above trouble can be entirely overcome. This will take some time, as it will be necessary to steam the boilers for a week or ten days and allow to cool gradually, then drain and open and allow to dry out. It may require several treatments to get results, but it is worth all the time and expense. In my position it is not permissible to recommend any particular standard article, but personally would recommend the Dixon Graphite as the best. It is probably more expensive per pound, but will get the best results."

Being in New Jersey, and with more or less New Jersey hayseed upon us, we are at a loss to understand why any man will hesitate to recommend what he considers to be the best and why, if he does recommend it and practically acts as your salesman, he should refuse to be known in the transaction or to have the company that he represents know what he is doing.

PROTEST OF THE MERCHANTS' ASSOCIATION OF NEW YORK AGAINST FURTHER EXTENSION OF PARCEL POST SERVICE

In a monograph addressed to Congress, and sent with an appropriate letter to President Wilson and to Postmaster-General Burleson, The Merchants' Association of New York state that "over ninety per cent of small parcel shipments originating in large cities are merchants' shipments." The association sets down the defects of the parcel post service as follows:

The parcel post omits the following essentials of a complete service:

1. It does not collect parcels;
2. It does not give receipts;
3. It does not provide indemnity for loss, except upon extra payment, and only to the amount of \$50.00;
4. It does not provide any indemnity for damage;
5. It does not provide controlling records, by reason of which omission the volume of loss is increased;
6. It does not provide special means of security for valuable parcels;
7. It does not provide adequate protection against damage, but on the contrary, promotes damage and loss by opening in transit;
8. It does not provide for the transportation of a wide range of special commodities.

It then adds that "unless the parcel post removes these defects, it cannot by any possibility fill the entire field of quick transportation."

THE PROBLEM of modern lubrication is to find a substance that will combine great smoothness with ability to endure heavy pressure and high speed, or that will mix with thick oil and reduce its internal friction.

THE FRICTION DEBBIL

How He Comes Back On The Job; And How He Slips Upon
Flake Graphite

In Three Parts

PART I

For many years Dixon's Fine Flake Graphite has been recognized as the panacea for all frictional troubles. Even before the present generation of engineers had begun to worry about lubricating problems, it was used by their fathers upon the comparatively crude machinery of their time. It made good. Today machinery is more wonderfully and finely fashioned and metals are much improved, but still the Demon Friction is on the job and must be satiated. That he is an unwelcome guest disturbs him not at all. Grease and oil dislodge him temporarily, but the moment vigilance ceases he clammers back on the bearing and starts his funny business. The only way to put the skids under the little Debbil permanently is to use flake graphite—not occasionally, but all the time.

Ingenious means have been devised to furnish ample lubrication and many special lubricants have been brought forth, still, except where flake graphite is employed, the problem of near-perfect lubrication is as far from solution as ever.

Plain oil or grease alone never will be entirely satisfactory, because their success is dependent upon too many physical conditions. They become too thick and sluggish in cold weather, too limpid in warm weather, the supply may fail entirely through neglect or improper regulation of feed or because of a clogged passage. These and numerous other reasons make the success of plain oil or grease always a cause for much concern and constant watchfulness. Frequently, in spite of an engineer's best efforts, a bearing thus lubricated becomes hot or scored and there is much excitement in the power house. In such circumstances the red can of graphite is hastily brought forth and used freely until normal conditions are restored.

Now it naturally occurs to the thoughtful observer to ask why human nature is so prone to operate in cycles, which in this case is represented by—oil or grease—confusion—flake graphite—order—oil or grease—confusion—flake graphite—order, *ad lib.*, instead of giving the situation a little intelligent study and seeking a better method of procedure.

PART II

It is obvious that something is wrong with most of the present systems of lubrication, though fortunately it is not difficult to point out the real fault. Briefly the condition and its remedy may be stated as follows:

All bearing surfaces are more or less rough, no matter how smooth they may seem to the eye or touch. Such surfaces create friction when rubbed over one another. Oil or grease interpose a film between the rubbing surfaces which tends to hold them apart and thus prevent metallic contact. So far, so good. But heat, heavy loads, a failure in the supply of lubricant, etc., cause the film to break and permit the two dry metals to meet. It is like rubbing two modified nutmeg graters together.

Very shortly something happens. Flake graphite invariably brings relief.

Evidently flake graphite possesses qualities not possessed by oil or grease. The fact is that when mixed with oil or grease the flakes are carried into the bearings and become attached by pressure to the comparatively rough surfaces. The flakes are virtually pinned fast to the tiny projections in the metal. Succeeding flakes slide over those already in place until they reach an unprotected spot and they in turn are pinned fast. Soon a complete veneer is formed over the rubbing surfaces. The graphite is solid, cannot be squeezed out of the bearing, is not affected by heat or cold and in addition is the most slippery substance known.

To all practical purposes the bearings are no longer metal, but are graphited, perfectly smooth and very nearly frictionless. Under such conditions a hot box is impossible. If flake graphite were fed to bearings constantly along with sufficient oil or grease to distribute it evenly over the parts, the lubrication problem would be solved. Very little oil is required and better lubrication is obtained at less cost. Should the supply fail, there is no cause for worry, because dry graphited bearings will run for a considerable time without serious trouble.

The above practice is already in force in many up-to-date plants and the idea is rapidly spreading because of its simplicity and common-sense principle. Special devices for feeding dry graphite or graphite and oil may be easily obtained and information concerning them will be furnished upon request.

PART III

Friction has been attacked in another way by designing roller and ball bearings—the so-called anti-friction bearings, which the makers claim to be so nearly perfect as to require no lubrication. It is true that such bearings operate with wonderful ease, but it is also true that they do generate some friction and that that friction may be decreased by the judicious use of properly prepared flake graphite lubricants. This statement is confirmed by reliable laboratory tests and by the actual experience of many users of ball bearings. They find that such bearings when properly graphited, run with less effort and that fewer replacements are required than when the bearings are run dry or are lubricated with plain oil or grease.

Graphite for ball bearings is prepared from a very carefully selected grade of flake, ground very fine. Any other form of graphite will pack in the races and jam the balls.

"Flake graphite" means DIXON'S, for it is the only kind of graphite entirely suitable for lubrication; it is universally known to be the best that the world supplies. For many years the Ticonderoga mines have furnished an absolutely uniform quality, that cannot be approached by any other form of graphite found elsewhere. Its success has brought forth a host of imitation "Flake Graphite" (when properly pronounced the "l" is silent), all trading on the reputation established by DIXON. The promoters have nothing to lose and all to gain; so palm off their gritty products on their victims as equal to "DIXON'S."

Many of these grades would be all right for foundry facing, but are injurious as lubricants because the grit in the graphite will ruin a bearing. It is because of sad experience with such material that true graphite has had to "phite" so hard for proper recognition. But victory gained under such conditions is all the more sweet—for those who have given up Dixon's

Flake Graphite for cheap and inferior kinds and have now returned to the "Old Reliable," have returned to stay—and are helping to win the battle.

Flake graphite will solve any lubrication problem providing a grade is selected that is adapted to the conditions. This is essential. The reason for all the reported failures is that the wrong grade has been used or that it has been used improperly. Do not judge graphite until you have given it a fair trial—then you cannot condemn it.

CONGRESS AND THE ONE-PRICE BILL

Congress has become literally a storm center in the matter of the one-price question.

The chief issue raised in the measure—that of permitting independent producers of branded and trade-marked merchandise to name and uphold the retail price—has been agitated in this country for more than ten years, but the question has been brought to a head by recent decisions of the United States Supreme Court hostile to resale price contracts. The rapid growth of mail order houses, chain and department store organizations, has in many quarters been attributed to the practice of price-cutting on standard goods, which, according to the bulk of testimony before the Judiciary Committee, unduly injures smaller competitors and drains the resources of the small city and town.

Professor Paul H. Neystrom, in his testimony before the Judiciary Committee of the House of Representatives, claimed that the cut price in retail stores is more generally of psychologic rather than of economic significance. Its purpose is to attract trade. When the prospective customer enters the store it is the well-understood duty of the sales people to try to sell him something else or in addition to the cut-price leader.

The Dixon Company has found that it is very often the jobber himself who indulges in cut prices, and probably his object is to impress the retail dealer in the same way that the retail dealer endeavors to impress his customer when he makes a cut price.

Even representatives of charitable organizations have wired the Interstate and Foreign Commerce Committee for permission to testify in favor of the uniform price bill, their contention being that the present unnatural expenditures for the bare necessities of life are due in a large measure to the lack of standard retail prices on merchandise of uniform quality.

The ability to buy branded goods everywhere at the same price, these witnesses argue, is an essential to the ability to plan purchases of necessities with accuracy and economy.

Apparently the idea back of it all is not a desire to fix prices in order to have a monopoly, rather it is a desire to have an opportunity to maintain standard prices on articles of standard manufacture and bearing the maker's name or trade mark.

POOR GRAPHITE is worse than none. Gritty graphite will cut your shafts like bits of emery. The only absolutely smooth, pure flake graphite, suitable for use as a lubricant, is found in the Dixon mines at Ticonderoga—where it may be discovered hereafter no one knows; but today the only guarantee that the machinery owner has of getting the best graphite is to see that the package bears the name: Joseph Dixon Crucible Company.

AN AMERICAN MARINE

Every reader of GRAPHITE who is interested in export business, should write Mr. E. V. Douglass, Secretary of the American Manufacturers Export Association, 66 Broadway, New York City, for copy of the May 1 bulletin of that association. In the bulletin he will find an especially interesting address by Mr. P. H. W. Ross on the work that the National Marine League is doing in connection with and supplemental to the efforts of the American Manufacturers Export Association.

Although every word of the address is interesting it is too long for us to reproduce herewith.

In part Mr. Ross said American manufacturers sell only five per cent of their products to non-Americans; that is, to foreign countries, and as a consequence there is, on an average, work for only ninety days in the year for American millhands to do. If we could sell even twenty-five per cent of what we make to non-Americans, our mills would run continuously and American labor would be employed continuously the year round. The business of American manufacturers would be five times as great as it is now, while the profits would be more than treble.

The American Manufacturers Export Association may be considered as the paymaster of American indebtedness. This is literally true, as it is only by the export of American products that we can offset our indebtedness abroad. Ninety-five per cent of what we make we sell to ourselves and not one cent of indebtedness to foreigners is liquidated thereby.

Forty years ago Germany was in the same position as America is today. Today Germany's merchant marine, though not the largest, is by far the most effective of any in the world, and forty-five per cent of what she makes she sells to non-Germans, while the Americans, as stated above, sell only five per cent of what they make to non-Americans.

Germany said when she woke up: "We have no ships of our own. England has shut out every avenue of foreign trade and we are obliged to use *her* ships, *her* banking facilities abroad, and you may be sure that all *we* can ever get is what *she* overlooks, and that is not very much." A few grasped the idea that the prosperity, nay the very life of the nation lay on the water. An organized movement was started and eventually that organization became the bone and flesh of the people everywhere throughout the German nation, with the result that German goods are today found in every part of the world, and instead of the small amount of five per cent, Germany sells to foreign countries forty-five per cent of her products, and they are sent out in German vessels and the business is transacted through German banks which may also be found in all foreign countries.

If American manufacturers hope to manufacture as well and as cheaply as the Germans, they must manufacture in large quantities and, manufacturing in large quantities, they must find markets for that quantity.

In other words, the same problem confronts the manufacturing and commercial interests of America that confronted the Germans a generation ago, and the question is: "Will the American manufacturers and commercial interests solve it in the same way that Germany did?" The United States is not as big a country as a great many Americans think. Many Americans have not the faintest idea that you can put the entire United States in Brazil and have room enough for the German Empire as well.

GRAPHITE



VOL. XVI.

JULY, 1914.

No. 7.

Issued in the interest of Dixon's Graphite Productions, and for the purpose of establishing a better understanding in regard to the different forms of Graphite and their respective uses.

BETTER BUSINESS

Our attention has been called to the article by William Hard in *Everybody's Magazine* under the caption of "Better Business."

"Price cutting," as spoken of in this article in *Everybody's Magazine*, has nothing to do with potatoes or spring hats or any other commodity subject to fluctuating prices and closing-out sales. It has only to do with uniform standardized products, on which the manufacturer has tried to name a uniform standard price.

The article is well worth careful reading by every business man. It shows how the vicious habit of price cutting may eventually drive from the market a most worthy article sold at a fair profit, leaving for the consumer to buy an article perhaps

not as good and not even as low in price as the standard price made by the manufacturer of the article driven from the market.

We are told by the New York *Globe* that the anarchist in business is the price-cutter. That there are two ways of selling goods—the oriental or primitive way, which is by haggling; and the modern way, which is by one price.

It is absolutely essential to sound business that price should be standardized. No great concern will continue to manufacture the best possible typewriter, cash register, talking machine, or soap, unless the retail price to the public can be maintained.

If A. B. C. soap, for instance, is sold at the same price everywhere, it is in a fair competition with all other soaps, which is good business and encourages the A. B. C. people to go on making the best soap they can. But if it is sold at cut rates it is in competition with itself, which is suicide.

The maker of a standard trademark article ought to have the right to say how much the retailer shall ask the public for it.

The Supreme Court, by an amazing decision, has said that he has not that right.

A bill (H. R. 13,305) is now before congress to legalize price-fixing. It ought to pass.

The government compels railways to maintain one price for all. Why prevent the manufacturer from doing the same thing?

It is not one price; it is cutting the price that is the serious charge against the great trusts. By cut prices they slaughter small dealers.

The bill spoken of above, known as the Stevens bill, ought to receive the enthusiastic support of all commercial clubs, boards of trade, publicists, and intelligent citizens, so says the New York *Globe*, and so say we.

TAKING OUR OWN MEDICINE

An inquiry from a large manufacturing concern in Montreal, Canada, relative to boiler graphite, has the following:

"Do you use it in your own boilers and what is the result?"

We have also received a letter from our Philadelphia branch, advising us that a representative of a chemical company manufacturing boiler compounds, made the statement to the head of a brewing company, "that the Joseph Dixon Crucible Company were not using boiler graphite in their boiler plant at Jersey City, N. J. Although they were selling it to other companies as a valuable product, they did not consider it of any value to themselves."

To the first inquiry we have replied that indeed we do use Dixon's Boiler Graphite in our own boilers, and we use only the Dixon Flake Graphite. We also told of the excellent results we have obtained.

To the second statement, which comes to us from Philadelphia, we have said that the representative of that chemical company is a liar, and we have tried to say it with all the force and vim that Teddy himself would have used, and we have nominated that representative as a candidate in full standing in the Ananias Club. We have further said that we would be glad to furnish a sworn affidavit to the fact that we are using Dixon's Flake Boiler Graphite in our boilers and also a sworn affidavit as to the excellent results we are getting.

We have, of course, used boiler compound in years gone by, the same as all other boiler users have done, and we had the same result—not as much scale probably as we would have had without the compound, but nevertheless hard scale and plenty of it, which necessitated the use of kerosene and the most approved up-to-date tools for getting rid of the scale.

Now that we are using Dixon's Flake Graphite we have no trouble whatsoever. In place of hard scale firmly attached to the metal, we have a soft sediment or scale not attached firmly to the metal, but easily gotten rid of.

Further details will be furnished on application.

"NOTHING is so fatal to men of government as the practice in office of what they preach on the stump."

ESTABLISHED 1827



INCORPORATED 1868



JOSEPH DIXON CRUCIBLE CO.

JERSEY CITY, N. J., U. S. A.

**Miners, Importers and Manufacturers of Graphite,
Plumbago, Black Lead.**

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BALTIMORE OFFICE, 1005 Union Trust Building.
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SOUTH AMERICAN AGENT,
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CUBAN AGENTS,
For all Products Except Dixon's American Graphite Pencils
Croft & Prentiss, Room 424 Lonja del Comercio, Havana.
For Dixon's American Graphite Pencils.
Harvey & Harvey, Mercaderes 4 bajos, Havana, Cuba.

THE WAY OF CORPORATIONS

The bigger the corporation the less it seems given to bragging about what it does for its employees. The result often is that the remark, "corporations have no souls," is applied to just those corporations that really have souls, but have too much dignity and self-control to brag about all of their kindly acts.

The Pennsylvania Railroad have more than 2,000 active employees who have been in the service of that railroad more

than forty years, and more than 1,500 men who have served forty years or more and have been placed on the roll of honor and retired.

There are approximately 500 men on the Pennsylvania Company's pay rolls who have been in its employ more than fifty years. 4,700 active employees are between sixty and seventy years of age—they are retired at seventy.

If the question were asked: "What about the Joseph Dixon Crucible Company?" we would reply that we have employees who have been with the Dixon Company more than fifty years, quite a few who have been more than forty years and a really long list who have been in the Company's employ more than twenty-five years. We would also say that boys who came with the Dixon Company as mail boys or as factory boys and started on the pay roll at \$2.00 to \$3.00 per week, are today in positions of trust and even as officers or superintendents of the company.

Quite recently a position became vacant on account of death, and the man who succeeded to that position said on being congratulated: "Well, I have been here for twenty-two years and there were times, of course, when I had the idea that it would be better to leave and take some position where I knew I could get better pay, but I felt that the Dixon Company was the right kind of a company to work for and I hung on, and now I am mighty glad I did."

The Dixon Company, like many other large corporations, never goes outside to look for a man for any position if it can find the proper man among its own ranks.

ATLANTA, GA., SOME TOWN

We have received, we presume through the courtesy of our branch manager, Mr. Jack Lewis of Atlanta, Ga., a little book of sketches and information issued by *The Constitution* of Atlanta. In it we learn:

152 trains come in and go out of Atlanta, daily.

Atlanta is the great market of the Southeastern region.

Its commerce in the Southeastern states amounts to \$340,000,000 annually.

Atlanta is headquarters for the insurance business of the entire South, and is the fourth largest insurance center in the United States.

Atlanta is headquarters for the railroad, telegraph, telephone and express companies of the South.

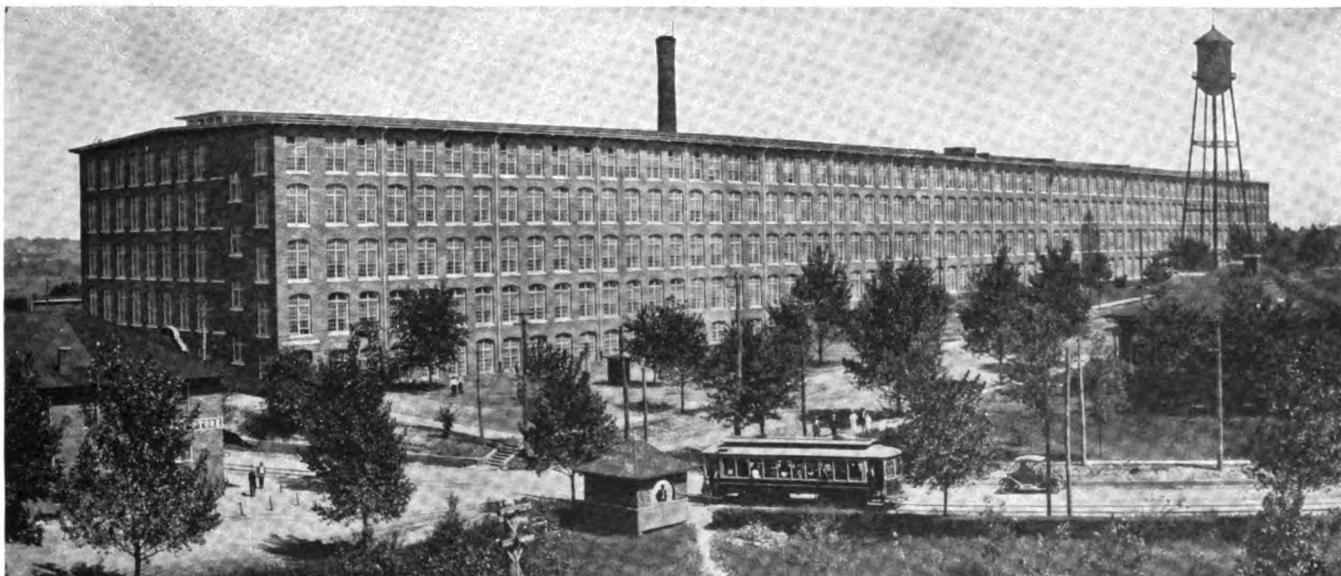
Atlanta is headquarters of the Southeastern Passenger Tariff Association, which extends from the Potomac and Ohio rivers to the Mississippi.

Atlanta's Post Office receipts substantially exceed those of any other city in the South.

Atlanta's national banking capital and surplus is \$8,600,000; individual deposits, \$24,531,575. This is larger than Louisville, New Orleans, or any of the other cities throughout the Southeast.

In ten years the banking capital of Atlanta has increased 400%; her deposits 500%; and her clearings 600%.

"IF GOVERNMENT attempts only government, its task is easier and simpler than conformity with the laws of economics when complicated with the laws passed by those who do not expect to conform to them themselves."



WOODSIDE COTTON MILL, GREENVILLE, S. C.

It is some time since we have reproduced in GRAPHITE the photograph of a structure located in South Carolina and protected with Dixon's Silica-Graphite Paint. In this issue, however, we are permitted, through the courtesy of the *Southern Railway*, to use an illustration of the Woodside Cotton Mill, Greenville, S. C. The smokestack and water tank to be seen in the picture above are painted with Dixon's Silica-Graphite Paint, and the same material is used for other exposed metal surfaces about this mill. Dixon's Silica-Graphite Paint is not only used upon smokestacks and water towers, but is equally well known as an ideal protective paint for bridges, grain elevators, pipes, steam drums, gas holders, fences and other metal work. To those of our readers particularly interested in smokestack painting, we shall be glad to send upon request our booklet descriptive of the service Dixon's Paint is giving upon smokestacks in many parts of the country. A postal request is all that is necessary.

CHARLES F. BROOKER

Is Tendered a Dinner by the American Copper Producers' Association to Celebrate his Fifty Years of Service
in the Metal Business

The name of Charles F. Brooker is intimately associated in the Dixon Company's office with that of the late John A. Walker, Vice President, Treasurer and General Manager of the Joseph Dixon Crucible Company.

Mr. John A. Walker began the crucible business with the Dixon Company in 1867, starting as bookkeeper. Mr. Brooker began in the brass business in 1864. Later on each became an officer in his company and they became close friends. Today Mr. Brooker is the president of the American Brass Company, with a capital of \$12,500,000.

The American Brass Company is the largest purchaser and consumer of copper in the world.

In an article published in the *Metal Industry*, we read of the wonderful growth of the copper output of the United States, from 17,000,000 pounds in 1864 to approximately 1,623,000,000 pounds in 1913, and the increase in the world from 83,000,000 pounds in 1870, to 2,204,000,000 in 1913.

In 1864 the quotation for copper wire was seventy-four cents a pound and brass wire sixty-four cents a pound, while today copper wire sells for sixteen cents, or thereabouts, and brass wire for between fourteen and fifteen cents.

Mr. Brooker said in his speech at the dinner:

"The wave of prosperity may recede for a time, but when the tide turns, as it always has, and always will, it will reach a higher point than ever before, and our history of continuing development will repeat itself."

Mr. Brooker has seen ups and downs enough to be a pretty good judge of business conditions. The above message, which was in the concluding portion of his address to the Copper Producers' Association, should be taken as the expression of a judge who is probably better able to read the signs of the times than most of his contemporaries, for his life, up to the present, has enabled him to study conditions from many angles and has made him the wise and good friend that his associates in business and outside of business know him to be.

SPEED KINGS USE KELLY METAL BEARINGS

The successful speed king is as much concerned in the mechanical perfection of the car he drives as is the automobile engineer, who designs it. No new detail of equipment or improvement of automobile parts escapes the attention of the man who risks his life and reputation and who seeks fame and glory upon the race track. A recent example of this spirit of attainment was illustrated at both the Santa Monica and Indianapolis Races. The car driven by Ralph DePalma at Santa Monica was equipped with Kelly Metal Bearings. These bearings, into the composition of which Dixon's Flake Graphite enters, are formed of a metal invented by W. H. Kelly of Los Angeles. So well did DePalma's car show up in the Vanderbilt Cup and Grand Prize Races at Santa Monica, that for the Indianapolis Race other cars, including the Stutz, Marmon and Maxwell, were equipped with Kelly Metal Bearings for the motor, that is the main bearings and crank pin bearings. The Moreland Truck Company, of Los Angeles is, it is said, busy making Kelly Metal Bearings because the demand for these bearings is at present greater than the supply.

MEXICO

Mr. William Joseph Showalter, writing to the National Geographic Society at Washington, D. C., makes us better acquainted with Mexico. He tells us that "with a university established before John Harvard, Elihu Yale, or William and Mary were born, the masses of its people are hopelessly ignorant. With a hospital founded before Jamestown was even dreamed of, it is one of the most backward regions of the earth in a medical way."

"With natural riches greater than those of a thousand Midases, its masses are just as poor as the proverbial church mouse."

"With a constitution as perfect as any organic law in the civilized world, it is a nation whose rulers always have been a law unto themselves."

"Here you will see a Mexican half-breed barefooted, wearing a dollar pair of trousers, a fifty cent shirt, and a ten dollar sombrero.

"There at a single glance and within the length of a single city block, you may see an Indian cargador, a donkey, an ox cart, a carriage, a railroad train, a street car, and an automobile—almost every type of locomotion since Adam."

"You may tread the burning sands of a tropical desert with the wet of the perpetual snows of towering mountains still upon your shoes."

"You may take a single railway journey of thirty-six hours in which the people you see at the railroad station will be dressed in four different weights of clothing."

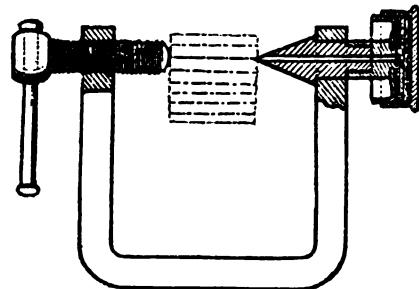
"Everywhere you turn there is contrast, high lights and deep shadows."

Very much more of the same interesting character is written by Mr. Showalter.

LUBRICATING THE SPRING LEAVES

Two prominent trade journals have recently devoted some attention to the subject of lubricating automobile springs.

Automobile Topics calls attention to a British patent, No. 25145, of a spring leaf separator devised by Mr. M. Schildge, the construction of which is shown in our sketch.



"After the leaves of a spring have been separated, lubricant must be placed between them. This means getting an oil can if oil is to be the lubricant, or a knife blade if it is to be graphite or grease. The result is that there are two tools and operations involved in the process of lubricating a leaf spring. One tool is the leaf separator, and the operation is that of separating the leaves. The other tool is the oil can or knife, and the operation is the application of the lubricant."

"Both tools can be combined into one, and so the two operations practically combined by the simple expedient of

boring a hole in the wedge of the leaf separator and mounting a grease cup on it."

The *Automobile Journal* favors a more thorough way of lubricating leaves and says to a subscriber in a recent issue:

"All components of a chassis subject to friction should be lubricated. Much of the hard riding qualities of a machine that has been in service for some time, are due to rust and foreign elements on the bearing surfaces of the springs."

"While it is possible to use a spring spreader, several types of which are marketed, for opening the springs sufficiently to permit of inserting a lubricant, the better method is to disassemble the spring. This will require a rugged clamp or a vise. The spring is displaced from the machine, placed in the vise and the jaws of the latter set up near the centre bolt. The latter is then removed and the vise opened gradually. The bearing surfaces of the leaves should be thoroughly cleaned and, if the surfaces are rough, smoothed with emery paper."

"Next prepare a mixture of flake graphite and oil. Use enough of the latter to make a thick paste and spread it over the bearing surfaces, then remove the surplus material with a cloth. Sprinkle a little of the dry graphite over the bearing surfaces and reassemble the leaves. The graphite will not only reduce friction to a minimum, but it will resist the action of water. It is surprising what a difference will be noted in the riding of the car after springs have been treated in this manner."

HIGHEST AND LARGEST CHIMNEY

A chimney 506 feet high, the tallest in the world, has been built for the Boston and Montana smelters at Great Falls, Mont. Its nearest rival is forty feet shorter and the next highest in America is 140 feet shorter. The main barrel of the chimney has an inside diameter of fifty feet at the top and about sixty-five feet at the base; its discharge capacity is 4,000,000 cubic feet of gas per minute. There are 17,000 tons of brick work in the entire structure, and the foundation, which is 103 feet across at the bottom and twenty-two feet six inches high, contains 4,300 cubic yard of concrete. An octagonal base, seventy-eight feet six inches across at the bottom and forty-six feet high, separates the main barrel from the foundation. A dust chamber, 478 feet long, 176 feet wide and twenty-one feet high, closely hung with small wires, strains the smoke before it enters the chimney. The flue which leads from the dust chamber to the chimney is forty feet wide and 1,238 feet long. The whole chimney has an acid-proof lining.—*Popular Mechanics*.

CLEANING LINOTYPE SPACEBANDS

A good surface for cleaning spacebands can be made by tacking a piece of heavy smooth leather on a board, using a little graphite for polishing the bands. If this will help other operators, give them the hint.

R. R. D. in the *Linotype Bulletin*.

THE EARTH'S population, according to the Bureau of Universal Statistics, has increased 140,000,000 in the last four years. And still there are firms who don't advertise because "our product is known to everybody."



RENE THOMAS, the Flying Frenchman, in his Delage Car, Winner of First Place and Prize Money in the Fourth Annual 500 Mile International Sweepstakes Race at the Indianapolis Motor Speedway, May 30, 1914

THE WINNING NUMBERS AT INDIANAPOLIS

History was never before made with such whirlwind rapidity as at Indianapolis on May 30, 1914. The Fourth Annual 500 Mile International Sweepstakes Race sped into automobile annals, shattering all previous records for this classic event in both intermediate and final distances.

As the checkered flag was waved for the last time at Rene Thomas in his powerful Delage, the Flying Frenchman had won the premier honors in America's most classic automobile event. And with these honors went nearly forty thousand dollars in prize money.

Never before had any car covered five centuries upon this brick track in six hours, three minutes and forty-five seconds and maintained an average speed of 82:47 miles an hour. As great a triumph, however, as this performance seemed, a still greater one was created as Arthur Duray in his Baby Peugeot, Albert Guyot in a twin car to that of the winner, and Jules Goux in another Peugeot, all crossed the finish line in better time than that made by the winner of any previous race.

Barney Oldfield in his Stutz, followed closely, a winner of fifth place and prize money.

Only eight other cars finished behind the smoke (cigar and exhaust) of Oldfield, five of them receiving prize money distribution. Josef Christiaens in his Excelsior; Harry Grant,

in an English Sunbeam Car; Charles Keene in his Beaver Bullet; Smiling Billy Carlson in his kerosene-burning Maxwell and Rickenbacher in a Duesenberg, were the remaining drivers and cars to divide the honors and the spoils.

Aside from the triumph and wonderful victory of Rene Thomas, a great interest was centered by a large proportion of this great gathering of over 100,000 in the methods and equipment of the cars and their drivers. To risk life and limb, time, money and reputation in an automobile race must necessarily demand, as it did of these speed kings, more than marvelous skill, reckless daring and wonderful judgment.

It demanded more—and that much the car-owner knew—but what? which? and why? The event furnished a golden opportunity for automobile experts and engineers, and for makers and owners to study the cause and effect of improvements, changes, etc.

All points and parts of the racing car were inspected and discussed and their relative merits compared and dissected. Agreements were few and far between upon all subjects but lubrication. Upon this subject many in that vast audience paused before an unanimous judgment which seemed even greater than that of wise men. Who could disagree upon evidence gathered by the experience of men who defied time and pursued fate in an automobile at one hundred miles an hour?

Wherever one went it was to see and learn more about graphite lubrication, to know and remember Dixon's Graphite



ARTHUR DURAY in his Baby Peugeot, Winner of Second Place and Prize Money at the Fourth Annual 500 Mile International Sweepstakes Race at the Indianapolis Motor Speedway, May 30, 1914

Automobile Lubricants; for remember carefully these words—*forty of the forty-five entrants, twenty-five of the thirty who qualified, and nine of the ten winners of the Fourth Annual 500 Mile International Sweepstakes Race used Dixon's Graphite Automobile Lubricants.*

If this statement of some facts does not suffice the man who pays more than is necessary for lubrication and is obliged to make frequent visits to the repair shops, then perhaps he will be interested in the reading of the following direct testimony of what happened at Indianapolis:

Rene Thomas writes: "I used Dixon's Graphite Automobile Lubricants in the Delage Car that won the 500 Mile Race at an average speed of 82.47 miles an hour. The lubrication was perfect."

Arthur Duray writes: "I had no lubricating troubles to contend with in the 500 Mile Race. I used Dixon's Graphite Automobile Lubricants."

Albert Guyot writes: "Dixon's Graphite Automobile Lubricants gave complete satisfaction at Indianapolis. I desire to express my complete confidence from my extremely satisfactory experience."

Barney Oldfield, after his first use of Dixon's Graphite Automobile Lubricants, wrote: "I have never before experienced the sense of safety and lubrication surety that I felt today."

Harry Grant writes: "In my Sunbeam Car at Indianapolis I used Dixon's Graphite Automobile Lubricants and in the future I intend using them in all cars that I operate."

Charles F. Keene writes: "I feel that our success at Indianapolis was largely due to the perfect lubrication of Dixon's Graphite Automobile Lubricants."

Billy Carlson writes: "Say anything you wish in my name regarding Dixon's Automobile Lubricants. They are perfection. I have used them in every race I have ever entered."

Teddy Tetzlaff writes: "In my Maxwell I made the fastest time in the elimination trial of all American Cars, with an average speed of ninety-seven miles an hour. Thanks to Dixon's Graphite Automobile Lubricants, as they, without a doubt, made possible this performance."

Ray Gilhooly writes: "The only graphite lubricants used in my engine or engine oil at Indianapolis was Dixon's Motor Graphite. All statements to the contrary are false. The lubrication was perfect."

Bob Burman writes: "I have used Dixon's Graphite Automobile Lubricants at different times in the past and the two Burman Cars and the Keeton Car that ran in the 500 Mile Indianapolis Speedway Race, were lubricated from end to end including tires with Dixon's Graphite Automobile Lubricants. I cannot imagine words that sufficiently express my confidence in the Dixon Graphite Automobile Lubricants."



ALBERT GUYOT in his Delage Car, Winner of Third Place and Prize Money at the Fourth Annual 500 Mile International Sweepstakes Race at the Indianapolis Motor Speedway, May 30, 1914

I am about to start building new cars for the 1915 race and have already decided upon the lubrication, viz. Dixon's. Enough said."

Joe Horan writes: "It is with great appreciation that I state that I have used Dixon's Graphite Automobile Lubricants for the last three years both in racing and touring, and it is my belief that they must become the standard lubricants of the world, for I have yet to find a fault from a lubricating standpoint in any part where I have used Dixon's. On one occasion, if I had not had your Motor Graphite in my engine, I would not have finished the race."

Billy Chandler writes: "I have used Dixon's Graphite Automobile Lubricants in racing cars for the past three years, during which time I have never had one minute's trouble with lubrication wherever I have used Dixon's. I consider them indispensable for either racing or touring cars."

George Clark writes: "This is an acknowledgment of my appreciation of Dixon's Graphite Automobile Lubricants. I consider them perfection. I have used them in all the cars I have raced, for several years past. Not only have they made my cars decidedly faster, but I have never had lubricating trouble of any description."

Jesse Callahan writes: "The Stafford Car I entered in the 500 Mile Race in Indianapolis was lubricated throughout with Dixon's Graphite Automobile Lubricants. I ran out of water in practice and my engine stalled. Had I not had your Motor

Graphite in the crank case, I am positive the engine would have frozen. My multiple disk clutch either grabbed or slipped no matter what I did with it, until I used a thin oil cut with kerosene and mixed therein about a tablespoon of Dixon's Motor Graphite. This smoothed it up and from then on the clutch operated perfectly. The balance of my car was lubricated throughout with Dixon's Graphite Automobile Lubricants and I want to say most emphatically that I consider them indispensable in either a racing or touring car."

MORAL:—Dixon's Graphite Automobile Lubricants are sold by all good garage men who are in business to make more than a profit. They are also obtained at high class hardware stores and wherever the better grade of goods are found.

THE OTHER day we heard a prominent engineer tell the purchasing agent of his company that when he used graphite it cut the steam engine cylinders. It seems that there are still a few engineers of the old school. Unfortunately this engineer has reached the stage at which few of the profession arrive, namely, that they are perfectly satisfied with what information they have and do not care to look into modern appliances and familiarize themselves with them. This engineer felt very ridiculous when he was confronted with facts and figures pertaining to graphite for cylinder lubrication. He was like Rip Van Winkle—asleep for a long time.



BARNEY OLDFIELD in the Stutz with which he won Fifth Place and Prize Money in the Fourth Annual 500 Mile International Sweepstakes Race at the Indianapolis Motor Speedway. In this classic Event Oldfield was the First American and his Stutz First American Car to Finish

SOME BOY

Vincent Murray, a fifteen-year-old boy, landed in New York and was gobble up by the immigration authorities at once, because they considered him an "undesirable citizen" and without enough money in his pocket to guarantee that he would not be a charge on the country.

In answer to the question concerning his health he said he could lick anybody who strips at ninety-four pounds, ring-side. If any one doubted it they might try. He said he was only five years old when his father died. Since then he has been working and travelling.

He worked on the home farm in Boffanaun, County Mayo, Ireland, until he was ten years old.

He said that he could ship as an A.B. sailor under sail or steam.

Was bugler of second company of Royal Canadian Garrison Artillery.

He understands semaphores, Morse wigwag, lights and whistle signals.

Strips at ninety-four pounds and licked the bandmaster of the artillery company for the ninety-four pound championship.

Carried a spear for a week in a Shakespearean production in Liverpool, and was the hind legs of a camel for three months in Scotland and Northern England.

Has had experience as ventriloquist and is willing to show off. Speaks German, Spanish, English, and some French and Chinese.

After Murray quit being a farmer he signed on the royal training ship Ganges, and after serving his time shipped to the China seas. After many trips he gave up the sea for the army in Canada.

Now he's here in New York, and after the examination of the immigration committee, it looked as though he would get the post of bugler on the United States revenue cutter Mohawk and be welcomed to these shores instead of deported.

A WAY TO ABATE SMOKE NUISANCE

A great many motorists wonder why graphite used in the crank case will eliminate the smoke nuisance. The explanation is said to be that smoking is caused by an excessive amount of oil getting by the piston rings into the explosion chamber, where it is burnt. By the use of graphite mixed in small proportions in the crank case, about a teaspoonful to the gallon of oil, the graphite fills in the pores in the metal and finally places a veneer over the entire surface, increasing the compression, and by so doing prevents an excessive amount of oil getting by into the explosion chamber.—*New York Times*.



JOSEF CHRISTIAENS in the Excelsior Car, with which he Finished in Sixth Place and Prize Money in the Fourth Annual 500 Mile International Sweepstakes Race at the Indianapolis Motor Speedway, May 30, 1914

GERMANS GLAD TO UNDERSELL AMERICANS

The Order Captured in Pittsburgh for Lead Pencils for the Public Schools is a Matter of Comment in a Nuremberg (Germany) Newspaper. German Pencil Factories Enlarged.

The German pencil manufacturers are rejoicing over their ability to undersell American manufacturers since the enactment of the Underwood tariff law.

To show how rapidly news of this kind travels from America to Germany, we will say that the Pittsburgh School Board decided on May 26th to take the foreign lead pencils, as the foreign manufacturers were the lowest bidders. The very next day an article appeared in the *Nuremberg Courier* (evidently cabled that night). The translation of the German newspaper article is as follows:

"GERMAN PRODUCTION IN FOREIGN COUNTRIES."

"From Pittsburgh we hear, after thoroughly debating the matter, the Public Schools of Pennsylvania have made contract with a Nuremberg company for the delivery of pencils for the Public Schools. Some speaker argued against the tariff law, which enables foreigners to undersell the American companies; other speakers praise this law, as it enables German manufacturers to break the prices heretofore obtained by American factories."

In the same paper there appeared an announcement that Count Faber Castell, the millionaire owner of the A. W. Faber

plants, entertained officials and others at a banquet to celebrate the completion of a new building, an addition to their present immense works at Stein, Bavaria, and built since the Underwood tariff bill was passed by Congress. It is said that the German manufacturers will undoubtedly add more additions if other American cities follow in the footsteps of Pittsburgh.

It certainly seems surprising that Pittsburgh should have taken the lead in contributing to German manufacturers, as Pittsburgh is a city that has benefitted more under a protective system than any other city in the United States, and through that system, Pittsburgh stands as the greatest monument to industrial growth that the world has ever known.

"SHELLAC," says *The Automobile*, "will not answer for painting the wheel rims of the automobile to keep them from rusting. The outside of the rim, that is the part that does not come in contact with the tire may be enameled, or coated with aluminum bronze. Any high grade elastic enamel will do. Before applying the enamel, the rims should be sandpapered to remove the rust. The parts of the rims that touch the shoe or tube should be painted with flake graphite mixed with enough gasoline or oil to make a paste. The graphite not only keeps the rim from rusting, but it prevents the tire from sticking."



HARRY GRANT in his English Sunbeam, with which he Finished in Seventh Place and Prize Money in the Fourth Annual 500 Mile International Sweepstakes Race at the Indianapolis Motor Speedway, May 30, 1914

A DEFINITION OF ECONOMY

The physical appearance and properties of some things we buy are only incidental to the service which we expect from them. How often the prices asked for such products blind us to this truth? How often does their appearance deceive us? When a man buys the wrong lubricating graphite in order to save a few pennies, the law of compensation gets busy and the machine he owns or operates grows a few gray hairs and soon looks prematurely aged. When a man thinks that "graphite is graphite" and all paints look alike to him, he is rudely awakened to the fact that repainting occurs too frequently and that the cost of additional labor looms like a mountain beside a molehill—the cost of a better paint. The gritty pencil and the pencil that cannot hold its point are dear to the writer at any cost. Thoughts are too important to be interrupted and time too valuable to be wasted in sharpening a poor pencil. The foundryman who buys crucibles by the price mark and not by the amount of metal they will melt, usually buys a greater number of crucibles than his competitor, and has for his lack of thought the trouble of handling them and the possibility of their breaking unexpectedly. Quality is the Dixon definition of economy. Is it yours?

THERE ARE three things in this world of about equal value "Reverend," "Esquire," and the twist in a pig's tail.

"ALL SCALE PREVENTED"

JOHN T. STANLEY

MANUFACTURER FINE TOILET, LAUNDRY AND TEXTILE SOAPS
642-652 West 30th Street, NEW YORK

NEW YORK, January 7, 1914.

Joseph Dixon Crucible Company,

Jersey City, N. J.

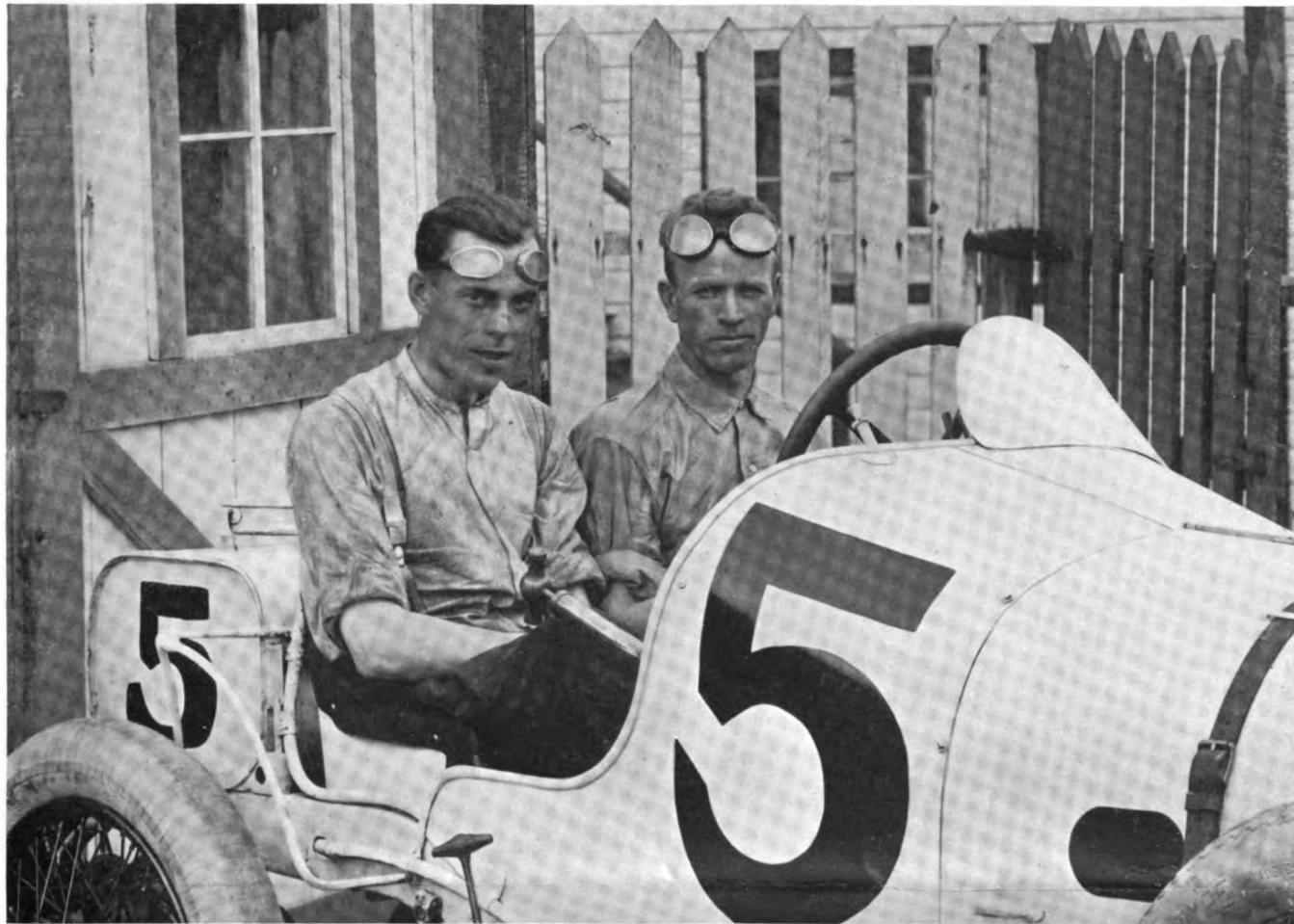
GENTLEMEN:—I have been using Dixon's Boiler Graphite No. 2 in four boilers for the past twelve months, with most satisfactory results. It has removed a great deal of scale, since I began using it.

In a new boiler, I certainly believe that all scale can be prevented; also that it will prevent pitting and grooving; the boiler feed pump runs very much better, operates easier and smoother, on account of feeding the graphite through the pump.

Very truly yours,

HENRY HELLEMANN, *Engineer.*

"INACTION in itself considered, is economical of time, effort and money. It costs nothing. Its consequences may be very costly. The government of a business and the building up of that business, the creating of new business, the making of the future of that business safe, calls for the real captain of industry."



CHAS. F. KEENE in his Beaver Bullet, with which he Finished in Eighth Place and Prize Money in the Fourth Annual 500 Mile International Sweepstakes Race at the Indianapolis Motor Speedway, May 30, 1914

BURDEN OWNERS CARRY

The following from *The Iron Trade Review* seems to be well worth the printing. In these days there is many an owner or manager of a business who goes home with a headache and with business problems bearing heavily upon him, while the workmen so often give no thought for the morrow and go home carefree. Of course there are workmen who do give thought for the morrow, and in these days of depressed business frequently go home with the thought of what may happen to them on the morrow, or the following Saturday night, whether work will be continued for them or whether they will be laid off. The article from *The Iron Trade Review* is as follows:

"If all of your workmen could know, today, the burden that shop owners have been carrying and are carrying in the problem of how to keep their men at work during this period of depressed business, there would be a great many men who would not stop to listen to the agitator, when he starts in again.

"That our men do not know such facts as this is your misfortune, and it is my belief that you have every right to uncover such facts and especially to educate your men to such an understanding of business conditions that they will cease to listen seriously to many of the wild statements made on the street."

DO NOT CONSIDER ANY BUT DIXON BRUSHES

CURTISVILLE, PA., December 20, 1913.

Joseph Dixon Crucible Company,

1020 Arch Street, Philadelphia, Pa.

GENTLEMEN:—About one year ago we placed a trial order with you for Dixon's Self-Lubricating Graphite Motor Brushes and we were so well pleased with the results obtained from the use of these brushes that we placed repeated orders, and now all of our motors, both above and underground, are equipped with them, and we do not consider the use of any other brush.

Our supply man, in making his monthly requisitions, instead of ordering motor brushes, specifies "Dixon's Self-Lubricating."

Yours very truly,

FORD COLLIERIES COMPANY,

W. B. POLLOCK, Gen. Supt.

BLUNDERED

EXE—"Cigar, old man?"

WYE—"Thanks! (puff, puff). Capital weed this. Aren't you going to smoke, too?"

EXE (examining the remaining one)—"No, I think not."

WYE—"What's the matter? Did you give me the wrong one?"—*N. Y. American.*



Smiling BILLY CARLSON in his Kerosene Burning Maxwell, Winner of Ninth Place and Prize Money in the Fourth Annual 500 Mile International Sweepstakes Race at the Indianapolis Motor Speedway, May 30, 1914

MISQUOTATIONS

It is easy to misquote, and the misquotations which follow are so common that everybody has heard them more or less. In the following list the misquotation is given first, and the correct versions, with reference immediately following:

"The tongue is an unruly member"—"But the tongue can no man tame; it is an unruly evil." (James iii., 8.)

"Charity covereth a multitude of sins"—"Charity shall cover the multitude of sins." (I. Peter iv., 8. Rev. Vers., "Love covereth a multitude of sins.")

"A little knowledge is a dangerous thing"—"A little learning is a dangerous thing." (Pope, "Essay on Criticism.")

"Speed the parting guest"—"Speed the going guest." (Pope, Satire II.)

"A man convinced against his will will hold the same opinion still"—"He that complies against his will is of his own opinion still." (Butler, "Hudibras," Part III.)

"Make assurance doubly sure"—"Make assurance double sure." ("Macbeth," Act IV., Sc. 1.)

"Benedict the married man" should be "Benedick the married man." ("Much Ado About Nothing.")

"Falleth as the gentle dew"—"Droppeth as the gentle rain." ("Merchant of Venice," Act IV., Sc. 1.)

"The man that hath no music in his soul"—"The man that hath no music in himself." (Ibid., Act V., Sc. 1.)

"Falls like Lucifer, never to rise again"—"Falls like Lucifer, never to hope again." ("Henry VII.," Act III., Sc. 2.)

"Thick as autumn leaves in Vallombrosa"—"Thick as autumnal leaves that strew the brooks in Vallombrosa." (Milton, "Paradise Lost," Book I.)

"Fresh fields and pastures new"—"Fresh woods and pastures new." (Milton, "Lycidas.")

"'Twas ever thus from childhood's hour"—"Oh, ever thus, from childhood's hour." (Moore, "Lalla Rookh;" "Fire Worshippers.")

"By small degrees and beautifully less"—"Fine by degrees and beautifully less." (Matthew Prior, "Henry and Emma.")

"A wet sheet and a flowing sail"—"A wet sheet and a flowing sea." (Cunningham.)

"When Greek meets Greek, then comes the tug of war"—"When Greeks joined Greeks then was the tug of war." (Nathaniel Lee.)

"Praise from Sir Hubert Stanley is praise indeed"—"Approval from Sir Hubert Stanley is praise indeed." (T. Moran, "A Cure for the Heartache.")

"The even tenor of their way"—"The noiseless tenor of their way." (Gray's "Elegy.")

"And all the air a solemn silence holds," instead of "And all the air a solemn stillness holds."

CUBA

Mr. Sydney Brooks, writing in the May number of the *North American Review* on Cuba, says:

All over the island drainage systems, water supplies, and the whole machinery of public hygiene have been carefully studied; Havana nowadays is flushed as faultlessly as Paris or Berlin; and Cuba, a frostless land of perpetual June, where the thermometer rarely falls to sixty degrees or rises above ninety degrees, where the trade winds play with daily refreshment and where the climate during the winter months is a great healer of bronchial troubles, is at last beginning to realize that its old and sinister reputation as a fever den was due to no natural causes, but simply to the folly and ignorance of man, and that its present position with the second lowest death rate in the world, is much more representative of its real merits . . . It has its cathedrals and its dungeons, its huddle of darkened streets, its narrow pavements whereon the battle of the wall is daily fought out, its cafes that sometimes turn down their lights, but never seem to close their doors, and where at all hours you can be served with a varied and delectable meal, out of doors or on the roof, with the blue-black waters of the bay beneath. It has its central, indispensable, palm-figured avenue and its fashionable afternoon driveway, skirting the Gulf of Mexico. It has its country club and its golf links, its carnivals and festivals, its sparkling suburb of Vedado, its contrasts of electric street cars, bullock wagons, and automobiles, its shrill peddlers, its opera house, its shops, where chaffering is carried to an almost Irish finish, its people-fluttered balconies, and above all, its high-pitched clanging noises. All this the average visitor, especially if he is from the United States, and has had few opportunities for contact with an alien environment, finds eminently satisfying. But the real destiny of Havana, if it means to become one of the permanent winter resorts of the West Indies, is to develop something on the lines of another Monte Carlo.

COLONEL ROOSEVELT'S RIVER

[An Editorial from the New York World, May 8th]

We refuse to permit any bilious Britisher, no matter what his scientific reputation may be, to shake our faith in Colonel Roosevelt's geographical veracity.

The Colonel is a little weak on the Constitution and the courts and the Sherman Anti-Trust law and treaty obligations and the Morgan corporation interests and such-like; but he is great on bugs and birds and lions and elephants and bobcats and dikdiks and grizzly bears and rivers and hills and trees and the Ten Commandments and similar phenomena of nature.

If the Colonel says the river is a thousand miles long, it's a thousand miles long. We wouldn't knock off an inch to avoid a war. If any captious critic claims that such a river in such a place must run up hill in spots and cross other rivers, let it go at that. Maybe it does, for all we know. Anyway, the Colonel has been there and seen the river and got boils and been ducked in the rapids and lost his dog and fallen off thirty-five pounds in weight, and can produce witnesses. That is more than the other side has offered to do.

The Colonel is not a nature faker, no matter how much of a political faker he may be. What he says and writes about

government and politics should always be taken with a few grains of salt; but what he says and writes about his hunting and exploring expeditions has generally withstood the acid test. As a naturalist, the Colonel never needs anybody to underwrite his statements. It is only in politics that he requires a Loeb.

NEEDED: AMERICAN BANKS FOR FOREIGN TRADE WITH BRANCHES ABROAD

We are told that an American citizen of many years residence abroad, who has no present or prospective interest in foreign banking as such, but believes that the United States needs American banks for foreign trade with many branches abroad, is distributing free, at his own private expense, much interesting information on the subject.

He tells us that foreign banks in South America today are English, German and French, ranked in the order of their financial importance. Holding large blocks of stock in these banks are the great exporters, merchants and manufacturers of the countries they represent. Naturally the sympathies of the men conducting the banks lie back in England, Germany and France. With that fact, the American trader cannot reasonably find fault.

Under present conditions, the American who invests or trades in the South American countries must depend more or less on these financial agencies of European management. In his dealings with them he necessarily discloses something of his purpose, of the extent of his capital, the nature of his backing, the mechanism of his business, the identity of the parties to his proposed transactions, the kind of competition he will bring into trade circles, and sundry other vital factors entering into his commercial enterprise. If he could transact his business through an American branch bank he would have, at least presumptively, a sympathetic and helpful medium.

FRICITION is the "death's head" of the automobile. Friction causes more than half your breakdowns—wastes 25% of your power. But

DIXON'S Graphite Grease 677

For Transmissions
and Differentials

eliminates friction and coats your bearings with a smooth, durable surface that means long life to your engine, smooth sailing for your car—and mighty few visits to the repair shop.

Write for the Dixon Lubricating Chart.

The Joseph Dixon Crucible Co.
JERSEY CITY, N. J.



Established in 1827



THE accompanying photograph represents an event in the way of a testimonial dinner given at the Duquesne Club, Pittsburgh, in honor of Mr. Henry Orville Hukill, Purchasing Agent of the Pennsylvania Lines West, who retired on his seventieth birthday, completing fifty-four years of continuous service with the great Pennsylvania Railroad Company.

The dinner was interesting because of the man in whose honor it was given, and because of the large attendance of prominent railroad and supply men.

Mr. Hukill himself entertained the company with his interesting and humorous reminiscences of the Civil War.

We regret that we have not space sufficient to publish the names of all the guests who participated. The number ran well up in the hundreds.

The Dixon Company was present through its Pittsburgh representative, Mr. D. M. Howe, who has a large personal acquaintance with railroad and supply men.

THE PENCIL

I am the pencil. I come from the balsamic hills made fragrant by the breath of kingly cedars. In my heart I carry the black carbon of Pluto's world—half-brother of the diamond.

I memorandum the business of a continent—and strike the trial balance in the traffic of the nations.

In the dizzy hours of morning I note the doings of the world, while presses wait like couchant beasts to fling my words to sleeping millions.

I am a factor in the world's great things; millions of nervous fingers reach for me every hour.

Through me captains of new thought lead on fast gathering hosts to make the creed of yesterday tomorrow's statute. With me the ermined seers mark out the canon that harmonizes with the basic law.

With me the pale faced scholar summons Grant and Moltke and Hannibal and Genghis Kahn and makes their phantom armies shake the world once more.

I tabulate the data from the crucible of wizard men, whose alchemy distills new serums to baffle death again.

I trace the drunken letters of the child whose dimpled fingers first try to form the characters of fabled Cadmus.

I sketch the song of the eager poet, the wings of whose white soul beat the cirrus clouds to shreds.

I am the democrat; the whittled comrade of the ragged urchin, confidant of the smooth-tongued diplomat, book-keeper of the lonely sheep herd upon the mountain side.

I am the cosmopolitan; known in every mart where barter changes money, in every part where commerce spreads her sails, in every city where the brain of man doth fabricate.

FRED R. ANGWIN in *Springfield Republican*.

THE COOLING OF THE EARTH

The application of Stefan's law to the calculation of the mean temperature of the Earth, at a given latitude, shows that at the latitude of eight degrees, the temperature was in the neighborhood of ninety deg. Cent., when the Sun's radius was about one and a half times its present dimensions, i. e., about two million years ago. Thus it would appear that life commenced on the earth in the vicinity of the poles. The same reasoning leads us to the conclusion that in less than two million years, when the sun's radius will be reduced by one-tenth of its present value, the temperature on the earth will have fallen below 0 degree, even at the equator.

—*Scientific American*.

TIDY RED TINS

A national advertiser of tobacco exhorts consumers to "get next to the tidy red tin for a joy smoke."

We make tidy red tins ourselves, containing Dixon's Graphite Automobile Lubricants, and joy riders, speed kings, tourists and all other classes of automobilists appreciate the quality of their contents.

TANK CARS.

The wear upon paint, in steel car service, is most arduous and the strain on the qualities of such protective paint is severe.

That Dixon's Silica-Graphite Paint has stood up under these conditions, and that the Dixon Company is receiving increased orders for this paint from owners of steel cars, is as good a testimonial as we can offer, of the unrivalled qualities of Dixon's Silica-Graphite Paint for the protection of all steel work, steel cars included.

The well known Wood Products Company of Buffalo, N. Y., are large manufacturers of Columbian Spirit Methylacetone and all grades of refined wood alcohol, and they own a very large equipment of 108 tank cars, which are despatched to all parts of this country to convey their products to an ever growing trade.

We are greatly pleased to be able to quote the following testimonial.

WOOD PRODUCTS COMPANY

BUFFALO, May 2, 1914.

J. A. CONDIT, Manager,

Joseph Dixon Crucible Company,

Buffalo, N. Y.

DEAR SIR:—We have 108 tank cars in active service, and after trying out thoroughly many of the paints on the market that are recommended for out-door iron work, we have settled down strictly to the use of yours. We find a tank car, properly scraped prior to painting, will be well protected for four (4) years' service with one coat of your paint. This, of course, is perfectly satisfactory to us and we invariably specified Dixon's Silica-Graphite Paint when ordering new cars and use it in all our repainting of tank cars and out-door tanks in our yard. With best wishes, we are,

Yours very truly,

WOOD PRODUCTS COMPANY,

N. M. PIERCE, Vice Pres.

THE DIFFERENCE IN DRIVERS

It is said that the difference in drivers is the difference of several years in the life of a horse, and it is equally true that the difference in drivers of an automobile is the difference of several years in the life of that machine.

A driver who is a master mechanic as well as a master of the road, will take pride in the internal mechanism of his machine from the engine back to the differential. He will see that all of the bearings are perfectly adjusted; that they are always filled with the most suitable lubricant for reducing friction; that all of the nuts and bolts are in place and are kept tight and snug; that the tires are well filled with air and are of equal pressure; and by seeing to all of these details that driver will largely add to the life and the smooth running of his machine.

"THE COUNTRY is prosperous only when the railroads are prosperous. When the railroads are double-tracking, extending their lines, bettering terminals, eliminating grades and curves, buying new equipment, building new bridges, we are all prosperous."

THE Twenty-eighth Annual Convention of the American Order of Steam Engineers convened in the Fourth Regiment Armory, Baltimore, Md., June 1 to 5 inclusive. Numerous matters of importance were discussed, and several papers were read on modern engineering subjects.

In connection with the Engineers' Convention, the American Order of Steam Engineers Supplymens' Association arranged, on the second floor of the Armory, a very instructive exhibit, represented by about seventy-five concerns manufacturing engine room accessories and supplies.

J. W. Pairent, Chief Engineer, St. George Building, Philadelphia, Pa., was chosen to head the engineers for the coming year, and Harry E. Souders, of John R. Livezey, Philadelphia, manufacturers of cold storage insulation and boiler pipe coverings, was chosen as president of the Supplymens' Association.

Atlantic City, N. J., was selected as the place for next convention in June, 1915.

The Joseph Dixon Crucible Company exhibited their full line of Dixon's Ticonderoga Flake Lubricating Graphites and Lubricating Graphite Greases, with especially interesting information regarding Dixon's Boiler Graphite for removal and prevention of scale in boilers, including remarkable samples of boiler scale removed by their boiler graphite.

DURING the National Textile Exhibition and Power Show recently held in Boston, the *Daily Trade Record* issued a special news bulletin which was distributed at frequent intervals, containing interesting items regarding the exhibition as well as the outside world. In one of the bulletins appeared the following lines:

A GOLD MINE FOR THE MILLS!

If you wish to run your mills
The very best and save in bills,
It pays to see the Dixon man
Who sells the Dixon labeled can
Of Dixon's Flake without a peer—
The friend of every engineer.
Their Greases, Crayons, Pencils fine
Reveal to you a golden mine.
Their boiler mixtures never fail
To stop the growth of deadly scale.
Their crucible or melting pot
Is safe to hold the metal hot.
Their paints, the very finest grade,
Of silica and graphite made.
Their dressings for the belt will guard
Against great loss and labor hard.
Use Dixon's Graphite Products true—
Most loyal friends they'll prove to you.

—H. A. NEALLEY.

JUST HOW THE HOSTILITIES BEGAN

HE—"Gwendolyn, dear!"

SHE—"Yes, Harold, darling?"

HE—"Did you use one or two cups of concrete in making these biscuits?"

DIXON'S graphite publications sent free upon request.

The WINNERS at Indianapolis

The speed wizards roared and thundered over the Speedway yesterday, fighting records with daring driving—and fighting Friction with Dixon's Graphite Lubricants.

No one thing decides a race like yesterday's. Tires, Engine, Gasoline, Lubrication, Daring, Skill, Chance and Physical Fitness play their part in the long grind.

But note—the winners—Thomas, Duray, Guyot, Oldfield, Christiaens, Grant, Keene, Carlson, Rickenbacker—used Dixon's Graphite Lubricants.

DIXON'S Graphite Grease 677 For Transmissions and Differentials

500 miles at over 80 miles an hour is some strain. One little burned out bearing and—Good Night. Let Friction get one whack at bearings or gears—he'll kill the driver's chances in a hurry. But wherever Friction threatens a part, experienced drivers stop him with Dixon's Lubricants.

Friction can't get past Dixon's Graphite Lubricants. They flag Friction before he gets started. Dixon's Graphite Lubricants protect every part, guard it with a thin, oily veneer of graphite that totally prevents metal-to-metal contact. Best of all, the heavier the pressure, the smoother and smoother Dixon's Lubricants become.

What the world's greatest racing drivers have learned by expensive and daring experience applies equally well to the bearings and gears of *your* car. Use Dixon's Graphite Lubricants.

**THE JOSEPH DIXON CRUCIBLE CO.
JERSEY CITY, N. J.
ESTABLISHED 1827.**

GRAPHITE



VOL. XVI.

AUGUST, 1914.

No. 8.

Issued in the interest of Dixon's Graphite Productions, and for the purpose of establishing a better understanding in regard to the different forms of Graphite and their respective uses.

THE BALANCE OF TRADE AND THE TARIFF

Professor Jenks of the New York University, in his paper read at the National Foreign Trade Convention, said that the balance of trade ought not to be an academic dissertation, explaining what is meant by the balance of trade, but should instead deal with the chief influences that affect the relations between the quantities of commodities exported and those imported and the effect of these influences upon the welfare of the country.

Broadly speaking, the old time view which regarded the accumulation of gold by a country as practically the sole means by which the wealth of the country is to be increased, has long since been abandoned, that gold

is of peculiar importance to a country under many circumstances and that its import and export will always be a matter of special interest.

It must be understood that in the long run the imports of a country or their equivalent in some form, must be balanced by the exports—otherwise we should have the merchants of foreign countries making us presents, or our merchants would be making them presents, neither practice, it seems hardly necessary to say, being common on a large scale.

The many conditions of business which tend to make a change in trade relations either favorable or unfavorable are interesting, but space prevents their elaboration. Suffice it to say that if the United States imports goods from some foreign country those goods must be paid for either in gold or in goods. There are of course many important invisible factors in trade relations, such as the payment of loans, the payment of interest, letters of credit, etc. Such sums run up into the hundreds of millions.

Outside of these invisible factors it is interesting to know about the exports and imports themselves, as there may be less fluctuation than in the invisible factors.

From the Manufacturers' National Information Bureau of Washington, we learn that the balance of trade is steadily running against us since the enactment of the new Tariff Law. The Tariff Bill was signed in October, 1913. In November we exported about 100 million dollars more of merchandise than we imported. In January, 1914, this excess of exports

fell to fifty millions. In February the excess was but twenty-six millions, and in March the imports received came within five million dollars of equalling the value of the American product shipped to other countries. During the month of April the pendulum swung to the other side, and the amount of imports exceeded that of exports by over ten millions.

A very interesting result of the new tariff is our trade with Canada. She has increased the monthly amount of her products sent to the United States from eight million dollars to twelve millions, and during the same period of time, reduced the amount paid to the United States for American goods sent there from thirty-three millions of dollars to twenty-six millions.

OUR DEPENDENCIES

If the average citizen were asked to name the dependencies of the United States, those territories which can only be reached by sea, we wonder how many would be able to answer correctly. There is Alaska, the Sandwich Islands, Midway Island, Guam and the Phillipine Islands on the West, and Panama, Swan Islands and Porto Rico on the East. Even now that we have named them, how many can tell just where these dependencies are?

In 1895, Porto Rico under Spanish rule imported from the United States \$1,833,544, and from foreign countries \$15,001,909.

In 1913, Porto Rico imported from the United States \$32,223,191, and from foreign countries \$3,745,057.

The growth of the Phillipine Islands under United States administration has also developed enormously.

AN EXAMINATION QUESTION

The following is asked in a series of examination questions in the *Pembury Engineer*: "If you had an outside packed boiler feed pump that leaked badly around the packing, what would be the cause and how would you remedy it?"

This is the answer: "The usual cause of pump packing leaking is either that the wrong kind of packing is used, or that the packing is worn out. The writer has found that the square flax and duck packing that are commonly used on pumps, are not adapted for use on outside packed plunger pumps, because they have to be drawn up so tight to prevent leakage that it causes excessive friction. A packing consisting of alternate solid and split rings gives excellent results. If the packing leaked, I would repack it with the proper kind, being careful to put the packing in properly, using plenty of graphite and cylinder oil between the rings."

ESTABLISHED 1827



INCORPORATED 1868



JOSEPH DIXON CRUCIBLE CO.

JERSEY CITY, N. J., U. S. A.

**Miners, Importers and Manufacturers of Graphite,
Plumbago, Black Lead.**

OFFICERS:

President—GEORGE T. SMITH
Vice President—GEORGE E. LONG
Secretary—HARRY DAILEY
Treasurer—J. H. SCHERMERHORN
Ass't Sec'y & Ass't Treas.—ALBERT NORRIS

DIRECTORS:

GEORGE T. SMITH	GEORGE E. LONG
WILLIAM MURRAY	EDWARD L. YOUNG
WILLIAM G. BUMSTED	HARRY DAILEY
J. H. SCHERMERHORN	

OFFICES AND SALESROOMS:

NEW YORK SALESROOM, 68 Reade Street.
 PHILADELPHIA SALESROOM, 1020 Arch Street.
 SAN FRANCISCO SALESROOM, 155 Second Street.
 CHICAGO OFFICE, 1324 Monadnock Block.
 BOSTON OFFICE, 347 John Hancock Building.
 PITTSBURGH OFFICE, Wabash Terminal Building.
 ST. LOUIS OFFICE, 501 Victoria Building.
 BALTIMORE OFFICE, 509 Professional Building.
 BUFFALO OFFICE, 72 Erie County Savings Bank Building.
 ATLANTA OFFICE, Fourth National Bank Building.

EUROPEAN AGENTS

Graphite Products, Ltd., 218-220 Queen's Road, Battersea, London.
 SOUTH AMERICAN AGENT,
 Alfredo J. Eichler, 666 Calle Cangallo, Buenos Aires, Argentine.
 CUBAN AGENTS,
 For all Products Except Dixon's American Graphite Pencils
 Croft & Prentiss, Room 424 Lonja del Comercio, Havana.
 For Dixon's American Graphite Pencils.
 Harvey & Harvey, Mercaderes 4 bajos, Havana, Cuba.

PURE GOODS

The dictionary gives the following definition of pure:

"Free from mixture or contact with that which weakens, impairs or pollutes, containing no foreign or vitiating material—hence genuine."

There are other definitions, but this one covers the ground very thoroughly, and we read that through serving the public pure food, J. R. Thompson, who landed in Chicago and opened

his first restaurant twenty-three years ago and whose total assets at that time were less than \$600, incorporated his business the other day for \$6,000,000.

Instead of working on the theory that the public likes to be fooled, he worked on just the opposite plan. Instead of watering the milk, thinning the cream, serving butterine for butter and making hash out of anything that was handy, he built his success on two words—*pure food*.

In the same way the Dixon Company has established a most enviable reputation for its pure Ticonderoga Flake Graphite. Like gold and many other things of value, Nature placed flake graphite where it is exceedingly difficult to get at. Ticonderoga flake graphite is found embedded in a very hard rock formation. In every hundred tons of ore taken out there is only found from three to five tons of flake graphite and only a portion of this becomes, after long purifying processes, the unsurpassed flake graphite.

Ceylon graphite and graphite from other parts of the world, is of the foliated formation and may properly be called flake graphite, but the word "flake" was chosen by the Dixon Company to designate the wonderfully tough, durable, smooth and marvelously thin flakes of Ticonderoga graphite.

Probably in all the world there cannot be found a flake graphite so thin, so unctuous and so peculiarly fitted for lubricating purposes as the Ticonderoga flake graphite.

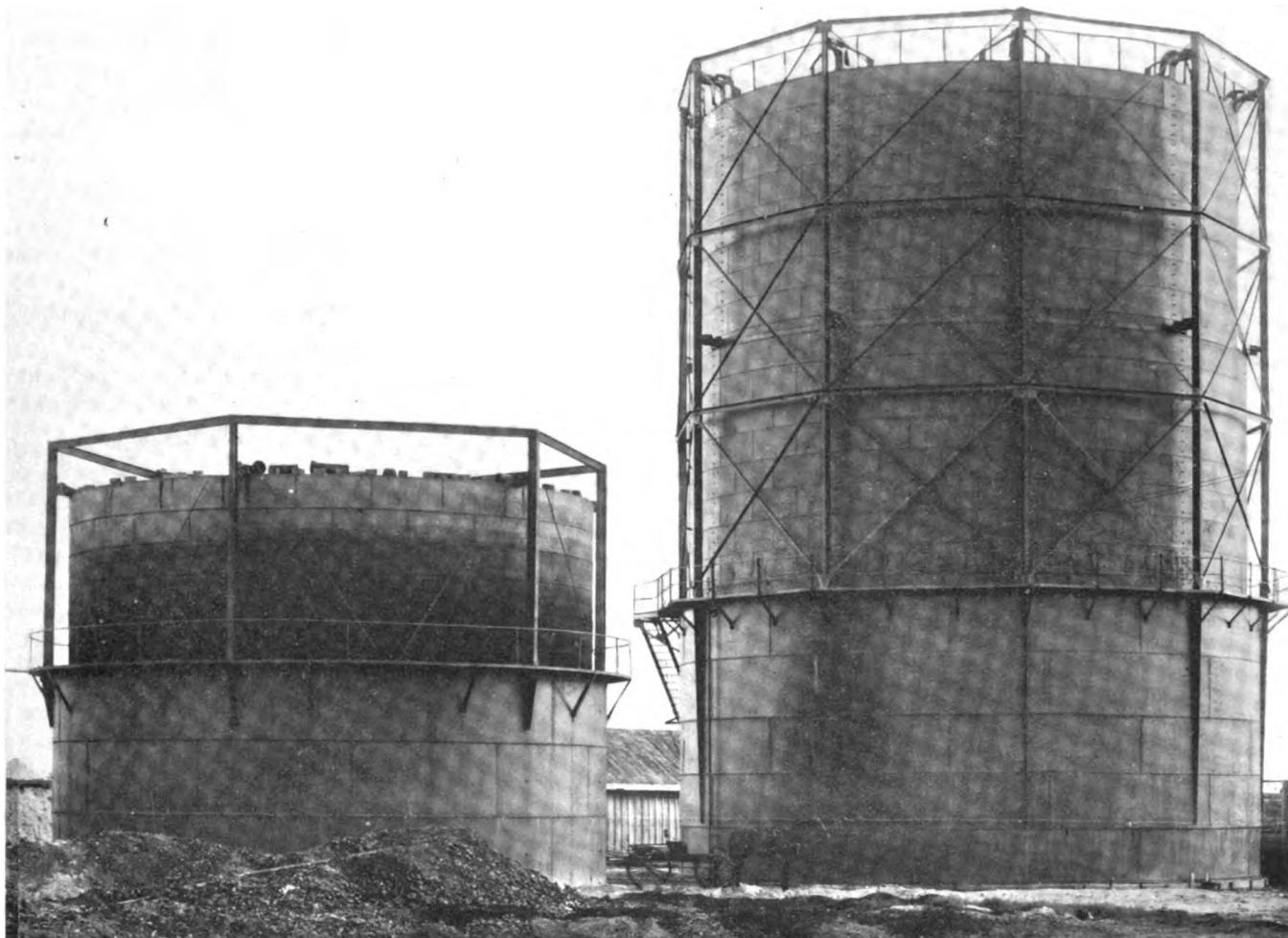
Companies have been formed for extracting this graphite from the Ticonderoga region, but the expense of getting out this graphite, and the lack of an organization to market the graphite, has caused the failure of all companies with the exception of the Dixon Company, and the loss of hundreds of thousands of dollars.

The Dixon Company imports and makes use of vast quantities of graphite of all kinds and from all parts of the world, but for its graphite lubricants it makes use of only the Ticonderoga flake graphite, except for its cheap graphite lubricants made for lubricating the timbers of launch-ways, for lubricating the curves in trolley tracks, and for other requirements where a low grade and more or less impure graphite, or an amorphous graphite, is sufficiently good.

WE READ in the daily papers that in a certain little coal mining town in Ohio the local school was made a present of one of the new-fangled pencil sharpeners.

Some of the youngsters noticed the fine shavings of cedar and graphite in the transparent receptacle at one side of the machine and one of the boys asked the teacher if he could empty it. In a short time he came staggering back into the school house a very sick youngster. It turned out that he and two other boys had made use of the pencil shavings for tobacco, had rolled cigarettes and smoked them. The other two boys had been overcome on the spot. It was probably all due to the strength of the cedar shavings, as there is nothing in graphite in anyway injurious, but when it comes to smoking material, in all probability alfalfa, corn tassels, mullen leaves, etc., are better substitutes for tobacco than wood shavings.

"MOTOR CARS in Greece," newspaper heading. Why not make it, "Grease in Motor Cars?" and call it Dixon's Graphite Grease?



**AMARILLO GAS COMPANY'S HOLDERS,
AMARILLO, TEXAS**

Gas and public service companies and municipalities are specifying Dixon's Silica-Graphite Paint as the protector for their gas holders. Why? Because it stands up under this arduous service better than any other paint. There can be no competitor, for the Dixon Company alone mines the remarkable pigment, which is Nature's mixture of the silica and graphite.

We illustrate above the Amarillo Gas Company's holders which are painted with Dixon's Silica-Graphite Paint.

When you think of *longer service* and real paint satisfaction and paint economy, think of Dixon's Silica-Graphite Paint.

PLEASANT TO KNOW

An Automobile Dealer says that the Condition of a Car can be known if he knows what Lubricants were used

A gentleman who owned a Chalmers car came into Dixon's New York branch, 68 Reade Street, the other day and said that his father-in-law had owned a Cadillac and traded it in for a new one. Before telling him how much they would allow him for the old car, they asked him what lubricants he had been using. He told them and they said, "If you had used Dixon's Graphite Lubricants, we would have known what condition your transmission and differential were in and would

not be obliged to tear it down to find out." The Cadillac Automobile Company recommended the use of Dixon's Graphite Lubricants throughout the new Cadillac car, and on the strength of this recommendation, the son-in-law went to Dixon's New York branch and bought lubricants for use throughout his Chalmers car. Where Dixon's Graphite Automobile Lubricants are used there is greater quietness in the running of the car and infinitely less wear.

BUSINESS MEN IN POLITICS

The following resolution, urging upon business men a larger participation in national affairs, was unanimously adopted by The American Protective Tariff League at the annual meeting of 1914, held on January 15:

RESOLVED, That it is in the power and certainly within the rights of American business men to exert a potential influence in American politics. Business has rights which politicians are bound to respect. To the end that these rights shall be respected the American Protective Tariff League recommends and urges a larger participation in political affairs by business men. It is important that they shall exert increased influence in public affairs. More business men in politics are needed for the congressional, state and presidential campaigns of 1914 and 1916, if the public business is to be conducted with intelligent and sane regard for the business needs and the prosperity of the country.



MARGARET E. BARRETT-SINNOTT

On April 10, 1897, a bright and alert little woman applied to the manager of the Chicago branch of the Dixon Crucible Company for a position. There was an air of business and self-command about her that impressed the branch manager, and the interview resulted in Miss Margaret E. Barrett becoming a member of the Dixon family.

In a very short time Miss Barrett had such a commanding knowledge of the goods made by the Dixon Company, of prices, of the uses of the various graphite products and other details, that she was considered indispensable. She knew the prices of the goods and the quality of the goods and when any buyer said to her that similar goods could be bought elsewhere at less money, it did not take her long to inform him that if he could get goods of that quality at less money elsewhere he had better buy them. This was said so gently and yet so firmly that the buyer usually wondered if he was not mistaken as to the quality of the other goods, and this would result in leaving his order with Miss Barrett.

Miss Barrett was always agreeable, but she could be coldly impersonal—so much so that she was able to keep the male creature at his proper distance. She had no chaperon and required none. She was always sympathetic and at all times a woman, which meant that all of the details of the office had about them the evidence of a clever woman's hand—things were orderly.

Such a woman naturally is sought out by other interests, but Miss Barrett was always loyal to the Dixon Company and no other firm was able to win her from the Dixon Company even by promise of increased pay. It was only when a big, strong man came along and laid siege to her heart that she capitulated and became Mrs. Sinnott, and after seventeen years with the Dixon Company she resigned to look after the affairs of Mr. Sinnott.

She leaves the company with the best wishes not only of the Chicago office, but of all the other branches and the general office, for we all have known her and known of her good work.

GRAPHITE

NO BITE IN GRAPHITE FOR LINOTYPES

In the June issue of GRAPHITE, under the heading of "A Hint to Linotype Operators," we had something to say about the use of a formula of a preparation used for the cleaning of matrices. The following from the *Linotype Bulletin* will not only interest those of our readers who have to do with Linotype work, but may also interest others in the value of flake graphite as a lubricant.

"Other than to discourage the use of Linotype matrix cleaning compounds, little has been said as to what these compounds were composed of or what the actual effect of their use on matrices would be.

"Recently I made several tests with one of these compounds, and the results may be of interest to your readers.

"The compound experimented with was in the form of small dark reddish brown crystals or prisms. The manufacturer's directions for using it were to dissolve a given quantity in a certain amount of cold water. The matrices were then to be immersed in the solution for three minutes, after which they had to be thoroughly rinsed in clear water.

"With this compound I made the following experiments: Three separate lots in three different receptacles were made, care being taken to have them as near alike as possible. Two Linotype matrices were put into each solution. At the end of three minutes the two matrices were taken out of the first pan. Ten minutes expired before the second two were removed, and twenty minutes elapsed before the third two were taken out. All the matrices were old and badly discolored when put in and all were perfectly clean and bright when taken out, although the two left in twenty minutes were not nearly so bright as those left in the solution only three minutes. Those left in only three minutes, when examined under the microscope, showed a slightly pitted surface. In the two left in ten minutes the pitting was more pronounced, while the two left in twenty minutes looked as if a sand blast had struck them.

"When analyzed this compound proved to be chromic acid crystals, which are made by dissolving potassium chromate in sulphuric acid. The crystals settle out and are then taken off.

"The effect of this solution on a Linotype matrix is to dissolve the zinc in the brass. It also diminishes the size of a matrix slightly each time it is treated, and also opens up the pores in the brass, thus making a surface to which type metal will cling very readily. My experience with this solution in cleaning Linotype matrices has been unsatisfactory. Any solution that is powerful enough to eat the zinc out of the brass certainly does not prolong the life of Linotype matrices."

Many things have been tried as a substitute for Dixon's Flake Graphite, but in Linotype work nothing just as good has ever been found. Dixon's Flake Graphite possesses a remarkable affinity for metal surfaces. In rubbing a Linotype matrice or space-band over a graphited board commonly used for cleaning and lubricating, the graphite is attached in minute particles to the metal surface and acts as a rust preventive as well as a lubricant.

"IT IS the men who are not conspicuous successes in the easier task who are setting the stint for countrymen whose practice must be the country's standard rather than the preachments of Congress."



RARITAN RIVER BRIDGE, NEW YORK & LONG BRANCH RAILROAD

The cool scene pictured above is between Perth Amboy and South Amboy and shows the Raritan River bridge of the New York and Long Branch Railroad.

Six years ago, at the time of its erection, this bridge was painted with Dixon's Silica-Graphite Paint. Salt air and other atmospheric conditions peculiar to New Jersey's climate, affected this structure so little that the road again decided upon the use of Dixon's Paint—the John Cronis Nestopoulos Company of Philadelphia being the contracting painters.

For railroad construction and maintenance work the very best is demanded and the selection of Dixon's Paint for such work is proof of its ability to give longer service—to make good.

DECLARATION OF PRINCIPLES

Adopted at the Eighth Annual Convention of the National Association of Manufacturers, New Orleans, Louisiana, April, 1903

The National Association of Manufacturers of the United States of America does hereby declare that the following principles shall govern the Association in its work in connection with the problems of labor:

1. Fair dealing is the fundamental and basic principle on which relations between employés and employers should rest.

2. The National Association of Manufacturers is not opposed to organizations of labor as such, but it is unalterably opposed to boycotts, black-lists and other illegal acts of interference with the personal liberty of employer or employé.

3. No person should be refused employment or in any way discriminated against on account of membership or non-membership in any labor organization, and there should be no discriminating against or interference with any employé who is not a member of a labor organization by members of such organizations.

4. With due regard to contracts, it is the right of the employé to leave his employment whenever he sees fit, and it is the right of the employer to discharge any employé when he sees fit.

5. Employers must be free to employ their work people at wages mutually satisfactory, without interference or dictation on the part of individuals or organizations not directly parties to such contracts.

6. Employers must be unmolested and unhampered in the management of their business, in determining the amount and quality of their product, and in the use of any methods or systems of pay which are just and equitable.

7. In the interest of employés and employers of the country, no limitation should be placed upon the opportunities of any person to learn any trade to which he or she may be adapted.

8. The National Association of Manufacturers disapproves absolutely of strikes and lock-outs, and favors an equitable adjustment of all differences between employers and employés by any amicable method that will preserve the rights of both parties.

9. Employés have the right to contract for their services in a collective capacity, but any contract that contains a stipulation that employment should be denied to men not parties to the contract is an invasion of the constitutional rights of the American workman, is against public policy, and is in violation of the conspiracy laws. This Association declares its unalterable antagonism to the closed shop and insists that the doors of no industry be closed against American workmen because of their membership or non-membership in any labor organization.

10. The National Association of Manufacturers pledges itself to oppose any and all legislation not in accord with the foregoing declaration.

PRAISES DIXON'S BOILER GRAPHITE

HUDSON LAUNDRY COMPANY

JERSEY CITY, N. J., Feb. 10, 1913.

Joseph Dixon Crucible Company,

Jersey City, N. J.

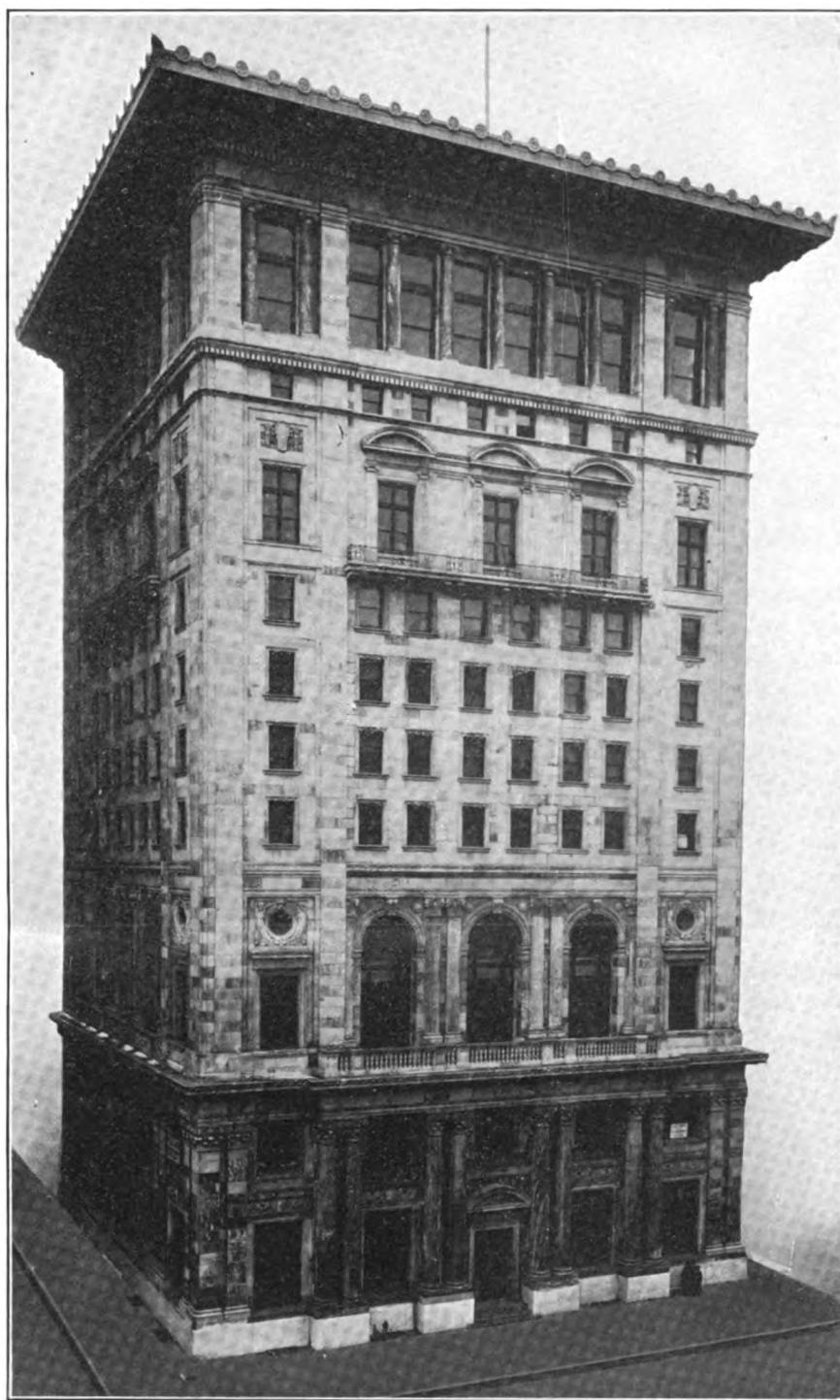
GENTLEMEN:—We have been using Dixon's Boiler Graphite No. 2 in our boilers for nine months with most satisfactory results. Before beginning the treatment, we were rather skeptical that any good results would follow, but are pleased to state that all your claims regarding the graphite as a scale remover have proven to be true.

Although cheaper graphite can be procured for the purpose, we believe it economy to use the best flake boiler graphite obtainable. At any price the expense is almost nothing.

We have four hundred horsepower in operation and use three pints of Dixon's Boiler Graphite a day, which gives very satisfactory results.

Very truly yours,
MARK WILSON,
Chief Engineer.

TRUE LOVE runs smoothly only when it's written with a Dixon Pencil.



**MANUFACTURERS' CLUB BUILDING,
PHILADELPHIA, PA.**

"How beautiful is this house,
The atmosphere breathes rest and comfort,
And the many chambers
Seem full of welcome."

"In these words of Longfellow, the officers and directors of the Manufacturers' Club of Philadelphia fittingly describe their new home, which is rightly considered to be one of the handsomest and best equipped clubhouses in the world. Situated on the northeast corner of Broad and Walnut Streets, Philadelphia, the new building occupies one of the most prominent corners in the city. It is directly opposite the Bellevue-Stratford Hotel and adjoins the new Stock Exchange.

Within a few blocks of the principal theaters, the large business houses and the railroad stations, the location is ideal for a club of this character, inasmuch as it is in the heart of things.

"The building itself represents a form of the highest type of modern architecture, and is one of the most attractive buildings in Philadelphia. The clubhouse is 180 feet high, occupying a lot 100 by 100 feet. Its foundations extend forty-seven feet into the ground, with a boiler room placed forty feet below the level of the pavement, which is in turn beneath the basement proper. The clubhouse includes the ten stories and this basement, and, being constructed of steel and concrete, is fireproof in every respect. The exterior is built of Green River limestone, which in time will resemble white marble. The architects have employed the Italian Renaissance style in designing the building both exterior and interior, and architecturally it presents a magnificent appearance, forming a most beautiful addition to the many handsome structures already located in Philadelphia. The design, which is the work of Simon & Bassett, Architects, of Philadelphia, was selected after a competition among the leading architects of the city, and represents a masterpiece of architectural art."

The above is part of a very complete description published in the *Textile Manufacturers' Journal*. To the *Journal* we are also obliged for the illustration of the Manufacturers' Club Building which appears on this page. The facts to be added are that the American Bridge Company fabricated 2000 tons of steel for the Manufacturers' Club Building and that Dixon's Silica-Graphite Paint was selected to protect it. Irwin & Leighton were the general contractors.

OUR RECORDS show that over ninety percent of the automobile racing men use and recommend the Dixon Graphite Automobile Lubricants. This we consider an excellent recommendation. One well known racing man said that when he uses the Dixon Lubricants he feels that there will be an absolute freedom from mechanical difficulties but no lack of lubrication.

GLYCERINE AND GRAPHITE FOR CLUTCHES

Fuller's earth generally is recommended for clutches that slip when they ought to grip, but something that is very nearly as desirable, and much easier to apply, is glycerine. It can be poured on the leather out of the bottle, and if there is any tendency for the clutch to grip too suddenly, a little graphite can be added to the glycerine.—*Gas Energy*.

THE QUEST FOR A COLD LIGHT AND A COLD BEARING

The manufacturers of electric lamps have long sought to produce a cold light. Nature has set an example in the glow worm and the firefly. Man seeks to imitate Nature. A light which is brilliant but cold would represent the ideal of efficiency. The new filament which glows in the modern incandescent electric lamp is said to give three times as much light as the old time filament with the same amount of current. In a lamp you want the light and not heat.

It is said that at least one-tenth of the power to run machinery is expended in overcoming friction. A "hot box" or a "hot bearing" is due to friction. A cold bearing means a saving of power—power that may be put to useful work.

In many plants the relative cost of lubricants is small. It would be economical to pay more—twice as much—to save several times that amount in the cost of power.

Omitting all discussion as to lubrication in general, or to the respective values of oils and greases, let us consider one thing only—that it has been most emphatically demonstrated and just as emphatically acknowledged: that tough, thin flakes of graphite build up the microscopical irregularities of a bearing, forming a veneer-like coating of marvelous smoothness and endurance.

Such a bearing will transmit more power and run cooler. The flake graphite may be added to the regular oil or grease used. Of course, where the graphite is added by the manufacturer of the lubricating oil or grease according to a formula that has been carefully studied and tested, the result is even better.

Today the same careful study is being given to better lubrication that is being given to better lighting. It means better service and economy.

In the early days only the carbon filament was thought of for electric lamps, no one thought of a metal filament. It has taken us forty years to convince a large majority of engineers and power users of the great value of a *solid lubricant*—Dixon's Flake Graphite.

LAWYERS WOULDN'T TAKE CASE

A certain credit manager in the New York downtown wholesale dry goods district received somewhat of a shock from a letter contained in his morning's mail. He had threatened a merchant tailor in an up-state town with suit if his firm's overdue account was not paid by November 1. The tailor replied as follows: "I have your letter, and it makes me laugh. I'll bet that your credit man does not pay his tailor, and as for your threat to sue me, that makes me smile broadly. How can you get any lawyer in this town to sue me when every one of them owes me money?"

THE USE OF LEAD PAINTS ILLEGAL

We read in a New York paper that lead paints are now prohibited in France—that for the protection of iron, graphite mixed with linseed oil is suggested.

This movement is evidently made with the intention of protecting the health of painters.

In Dixon's Silica-Graphite Paint there is absolutely nothing that is injurious in any way to the health of a man or to the surfaces on which the paint is applied.



WATER TANKS, BOSTON & MAINE RAILROAD

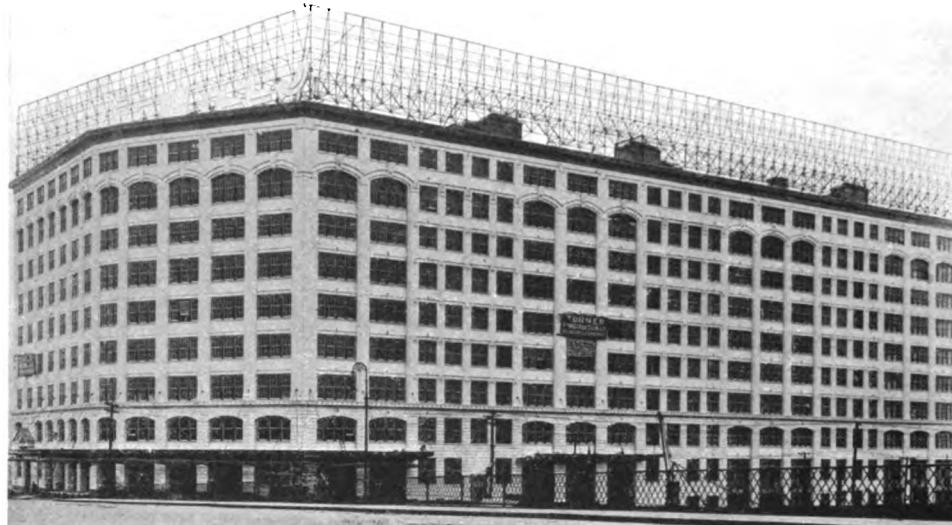
Railroads particularly have for many years been users of Dixon's Silica-Graphite Paint because of its ability to render longer service and to stand up against usual and unusual conditions.

The above and below illustrated water tanks of the Boston and Maine Railroad are painted with Dixon's Silica-Graphite Paint, the perfect protector against corrosive attack by rust, smoke, acids, ice and snow, sulphur fumes, ashes, brine, dampness, sea air, etc.

Is your company a user of this popular and thoroughly tested protective paint?



DIXON'S GRAPHITE PUBLICATIONS SENT FREE UPON REQUEST.



**LOOSE-WILES BISCUIT COMPANY'S BUILDING,
LONG ISLAND CITY**

The above illustration, by courtesy of *Architecture and Building*, shows the immense new factory at Long Island City, N. Y., of the Loose-Wiles Biscuit Company.

This building is a combination of steel and concrete construction, and was designed by Mr. William Higginson, architect. The steel work was fabricated by the American Bridge Company, and erected by Post & McCord. The general contractors were The Turner Construction Company, and the contracting painters, J. I. Hass, Incorporated.

The steel work is protected with Dixon's Silica-Graphite Paint, which is specified by architects, engineers and owners all over the country because, in its protective service, it practically becomes part of the metal and therefore protects from corrosion. No other company manufactures so fine and clinging a paint film. *One quality only—the best.*

THE COLONEL'S RIVER

As Considered by Walt Mason, the Poet-Philosopher

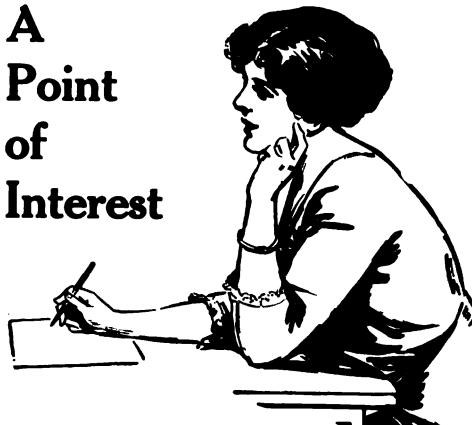
The colonel afar in Brazil has found a new river, they say; it's deep and it travels up hill, and broadens out into a bay. Its borders are ruggedly bluffed, it has some preposterous falls; the colonel will soon have it stuffed and brought to Smithsonian halls. It has a most wonderful bend, this river the colonel has found; and sometimes it stands upon end, then burrows down into the ground. Its waters are yellow and pink, it's covered with glittering foam; they say it's lot better to drink than any old grape juice at home. And sirens recline on its shore, their music is heard through the mist, and down on its beautiful floor the mermaids are playing bridge whist. We've always felt sure in our mind the colonel would do things in style, and any old stream he might find would beat other streams by a mile. Good-bye to the old Mississippi. Its fame and its glories will flee. The Amazon henceforth may slip unsung to its grave in the sea. The Rhine and the Danube, I fear, must down to Oblivion flit; the colonel has captured their peer, and broke it to saddle and bit. Goodby to famed streamlets and burns, the Afton, the Avon, the Po. And now when the colonel returns, just mark how such rivers sing low.

GRAPHITE AND RUST

"It is generally admitted," says the *Club Journal*, "that graphite properly refined is a good lubricant for certain parts of the motor car. Its usefulness is not confined, however, to its action strictly as a lubricant. It is an excellent rust preventative on parts which otherwise become corroded very easily. It can be used to prevent the rusting of rims, both of the demountable and clincher types. When applied to the thread of a spark plug which has a tendency to rust in place, it often prevents its sticking, and thereby avoids much annoyance. The same applies to other parts, such as valve caps, exhaust fittings, etc., which are most likely to become oxidized by the action of the air under conditions of heat or moisture."

THERE IS many a slip between one flake of graphite and another.

**A
Point
of
Interest**



is the pencil point
with which we write our thoughts.

Thoughts are too
precious to be wasted
and time too valuable
to be lost upon a pencil
that cannot hold its
point. Try out a Dixon's
Anglo-Saxon Pencil—it
may be just the pencil
you have always been
looking for.

**DIXON'S
ANGLO-SAXON
PENCILS**

"Leads that never vary"



The illustrations above and below show the Convention of the Oil Mill Superintendents' Auxiliary, held at Columbia, S. C., June 2 to 5 inclusive.

Mr. J. P. Chase, the Dixon Company's representative for Dixon's Silica-Graphite Paint, Boiler Graphite, Belt Dressings and Graphite Greases, is identified in the lower illustration by the white cross upon his coat.

The convention was a most successful one in attendance, interest shown, and new prospects discussed. Manufacturers and superintendents, managers, etc., were most profitably brought together, and the result will be a better understanding and increased business. The personal equation, as usual, counts heavily. We were glad to meet our friends face to face and hand to hand.

The Dixon Company appreciates the courtesies shown its representatives and assures the members of the Auxiliary that its motto will be, as in the past, "Longer Service Products."

A MOOR'S IDEA OF ABSINTHE

An old Moor, when told that the sale of absinthe had been forbidden in Morocco, said:

"Absinthe is an invention of the Evil One. On its roots he pours the blood of a peacock; then, when the leaves begin to grow, he sprinkles them with the blood of a monkey; then he dips the stalks in the blood of a bear; lastly heminges with the juice of the plant the blood of a pig."

"So that when the faithful drinks absinthe, at the first glass his appetite awakes, and he arises, proud as a peacock; at the second glass he becomes excited and gesticulates like a monkey; at the third he becomes quarrelsome and spiteful, like a bear; at the fourth he becomes besotted and falls to the earth and rolls like a hog in the mire.

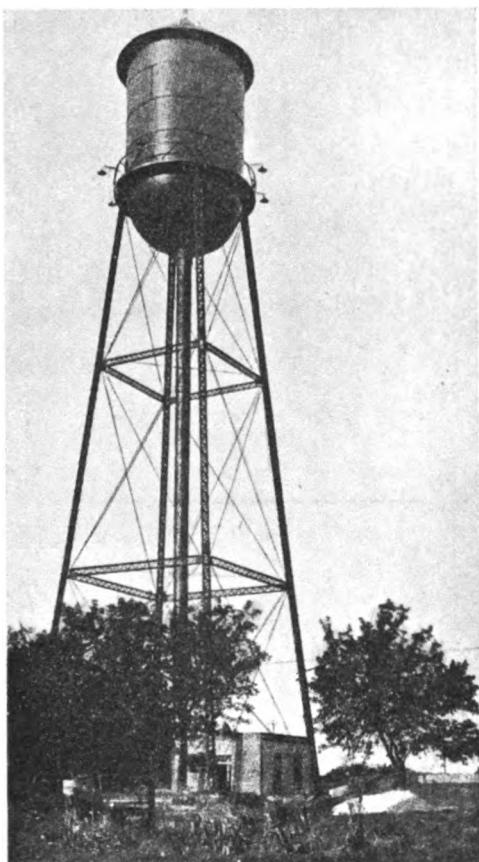
"May Allah protect us."

THE MANLY MAN

The world has room for the manly man with the spirit of manly cheer;
The world delights in the man who smiles when his eyes keep back the tear;
It loves the man who, when things go wrong, can take his place and stand
With his face to the fight and his eyes to the light, and toil with a willing hand;
The manly man is the country's need, and the moment's need, forsooth,
With a heart that beats to the pulsing tread of the lilded leagues of truth;
The world is his and it waits for him and it leaps to hear the ring
Of the blow he strikes and the wheels he turns and the hammers he dares to swing;
It likes the forward look in his face, the poise of his noble head,
And the onward lunge of his tireless will and the sweep of his dauntless tread;
Hurrah for the manly man who comes with sunlight on his face,
And the strength to do and the will to dare and the courage to find his place!
The world delights in the manly man, and the weak and evil flee,
When the manly man goes forth to hold his own on land or sea!—*American Israelite*.

Dictating letters is pleasant enough,
Raising prices is swell,
Getting complaints is a little mite tuff,
But competition is h—.





STANDPIPE, SABETHA, KANSAS

Municipalities and water companies in many parts of the country are specifying and using Dixon's Silica-Graphite Paint in the protection of standpipes.

We illustrate above the municipal standpipe of Sabetha, Kansas, on which Dixon's Silica-Graphite Paint is giving very satisfactory service, by withstanding rust and all other kinds of corrosive attack. No other paint gives equal economy and satisfaction, hence its popularity.

YOUTH

By DR. FRANK CRANE

Youth is not a time of life; it is a state of mind. It is not a matter of ripe cheeks, red lips, and supple knees; it is a temper of the will, a quality of the imagination, a vigor of the emotions. It is the freshness of the deep springs of life.

Youth means a temperamental predominance of courage over timidity, of the appetite for adventure over the love of ease. This often exists in a man of fifty more than in a boy of twenty.

Nobody grows old by merely living a number of years. People grow old only by deserting their ideals.

Years wrinkle the skin; but to give up enthusiasm wrinkles the soul.

Worry, doubt, self-distrust, fear and despair—these are the long, long years that bow the heart and turn the greening spirit back to dust.

Whether sixty or sixteen, there is in every human being's heart the lure of wonder, the sweet amazement at the stars and at starlike things and thoughts, the undaunted challenge of events, the unfailing, childlike appetite for what next, and

the joy of the game of living. You are as young as your faith, as old as your doubt; as young as your self-confidence, as old as your fear; as young as your hope, as old as your despair.

In the central place of your heart is an evergreen tree; its name is Love. So long as it flourishes you are young. When it dies you are old.

In the central place of your heart there is a wireless station. So long as it receives messages of beauty, hope, cheer, grandeur, courage, and power from the earth, from men, and from the Infinite, so long are you young. When the wires are down and all the central place of your heart is covered with the snows of cynicism and the ice of pessimism, then you are grown old, even at twenty, and may God have mercy upon your soul!—*May Cosmopolitan*.

Hour after hour the cards were fairly shuffled,
And fairly dealt; yet still I got no hand.
I rose from play, and with a mind unruffled
I only said, "I do not understand."

Life is a game of Whist. From unseen sources
The cards are shuffled and the hands are dealt.
Blind are our efforts to control the forces
Which, though unseen, are no less strongly felt.

I do not like the way the cards are shuffled;
But yet I'm in the game and bound to stay;
And through the long, long night was I, unruffled,
Play what I get, until the break of day.

CONSIDER the cost of labor in any painting job as against the price of paint. Make up your mind that a more durable paint like

DIXON'S SILICA- GRAPHITE PAINT

lengthens the intervals between repainting and saves in the cost of labor. Booklet No. 190-B upon request.

For exposed metal surfaces of all kinds.

Made in JERSEY CITY, N. J., by the
JOSEPH DIXON CRUCIBLE COMPANY
ESTABLISHED 1827

"EFFICIENCY"**What is it?**

The *Automobile Dealer and Repairer*, commenting on the announcement made that the Ford Automobile Company was to lay off 6,000 workmen, makes mention that the month preceding this report the Ford Company turned out more than 30,000 cars, or at the rate of 360,000 a year—more automobiles than the entire country has ever consumed or purchased in a single year. It is then pointed out that here is an example of efficiency that ought to satisfy the "efficiency engineers," or any others that may think efficiency is a cure for all economic ills. The *Automobile Dealer and Repairer* tells us that it should be borne in mind that whenever we use this word "efficiency" or have used it, we give it the usual meaning of economic productivity and not the more remote definition of superior quality. We mean an efficiency that saves time and not an efficiency that by superiority of product must naturally consume it.

We are told that with an efficiency of production far beyond the efficiency of consumption, the Ford Company were confronted with just two methods of action: Either they had to throw this surplus production on the market and sell it at a forced sale for just what the cars would bring, thus demoralizing or ruining the automobile business, or discharge 6,000 workmen and compel them to throw their labor upon the market at a forced sale, and thus demoralize the labor market.

Of course the Ford Company chose the last named course, as they had a right to do. When the men "stormed the factory" in the hope of getting back, the Ford Company did the most humane thing they could do under the circumstances by turning the hose on them. When a crowd of men surround a factory for work and will not disperse on request, something must be done.

The *Automobile Dealer and Repairer* has a decided disposition to criticize the general craze for "efficiency" that produces such a condition, and it does criticize the matter in a very clear manner well worth the reading. It adds: "But some one may ask how efficiency of consumption can be increased or how efficiency of production can be decreased. We

reply that there is no way to do this except to reduce the hours of work, and put up the bars against the horde of incoming foreigners.

"Of course there are a good many who imagine we can get rid of our excess production in foreign markets. But they are woefully mistaken.

"Even with our new tariff law that was supposed would enable manufacturers to produce at less cost than ever before, our exports are millions less per month than they were a year ago when it went into effect. It is easy enough to see why. Our competing nations are finding it more imperative than ever before that they get rid of their surplus production; or rather, their surplus production is greater than ever before on account of "efficiency" and naturally they can undersell us when they pay far lower wages.

"An exchange of things that nations do produce for things they do not, is the only kind of foreign trade among nations that can go along for any length of time.

"Any individual who imagines that with high wages we can supply other nations that pay low wages with manufactured goods they also produce, is simply woefully mistaken. We shall do well if we succeed in holding our home market, and this can be done only by tariff restrictions."

ARMING THE BEES

The native bee of Cuba, unlike the American honey bee, has no stinger and can be handled without fear. An American apiarist in a Pinar del Rio town imported some American bees recently, and, because of their superior armament, they soon became masters of the surrounding sweetness, much to the disgruntlement of the native honey raiser. The American bees stung their rivals to death, carrying off the stored honey in triumph.

"What chance has a Cuban got against the Americans!" exclaimed one owner of vanquished honey-gatherers. "They even arm their bees."—*The Times of Cuba*.

DIXON's graphite publications sent free upon request.

A New Dixon Eraser

DIXON'S **RED
AND
GRAY** **DISC ERASER**
No. 1095

A combination of first quality erasive rubber for both pencil, ink and typewriter marks.

Any of our readers welcome to a sample if they will please request same.

Made in JERSEY CITY, N. J., by the

JOSEPH DIXON CRUCIBLE COMPANY

ESTABLISHED 1827

You Wouldn't Use Axe Grease in a Sewing Machine

No! Nor lard oil in your timepiece. Neither would you lubricate a truck axle with watch oil. Get the point? Your car has its axles, yes, and it has some mighty delicate bits of mechanism—every part will give its best service only when the lubricant best suited to its needs is used. That's why there's a Dixon Graphite Automobile Lubricant that meets the demands of every part. Introduce yourself to Dixon Lubricants; start in with a can of

DIXON'S Graphite Grease 677 For Transmissions and Differentials

and learn to know the lubricant that puts the everlasting crimp into friction, to stay put. You'll notice right away how much easier and quieter your car is running. Then you'll notice that you don't visit the repair shop very often. One thorough trial of the specially prepared flake graphite used in all Dixon Graphite Lubricants and you'll never change.

Dixon's Graphite is a fine flake graphite, so thin, so pure, that it cannot ball up or pack. It fills in the microscopic roughnesses that cause friction in even the most highly polished bearings, and makes a smooth, oily veneer that grows harder and smoother and firmer the more it is rubbed and used. It is the only graphite that has these qualities, *and it won't adhere to itself.*

Garagemen who give 100% value for every dollar they charge will tell you to use Dixon's Graphite Lubricants; famous speed kings of road and track; experienced pathfinders and veteran cross country drivers, will all tell you how invaluable is Dixon's Flake Graphite; one test of it on your own machine will convert you for the rest of your motoring days.

The Dixon Company have established a wonderful name for lubricating graphite and other producers of graphites are trading on this Dixon reputation. Get Dixon's Graphite Lubricants and you protect yourself against the cheap greases that *can't* make good. "Dixon's *will*."

THE JOSEPH DIXON CRUCIBLE COMPANY
JERSEY CITY, N. J.
ESTABLISHED IN 1827

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Graphite

Issued in the interest of
the purpose of establishing
different forms of Graphite

Productions, and for
and in regard to the
use.

Vol. XVI

No. 9



WILL
HAMMEL
+ A.C.

September
1914

ESTABLISHED 1827



INCORPORATED 1868



JOSEPH DIXON CRUCIBLE CO.

JERSEY CITY, N. J., U. S. A.

**Miners, Importers and Manufacturers of Graphite.
Plumbago, Black Lead.**

OFFICERS:

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Vice President—GEORGE E. LONG
Secretary—HARRY DAILEY
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 ST. LOUIS OFFICE, 501 Victoria Building.
 BALTIMORE OFFICE, 616 Professional Building.
 BUFFALO OFFICE, 72 Erie County Savings Bank Building.
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EUROPEAN AGENTS

Graphite Products, Ltd., 218-220 Queen's Road, Battersea, London.
 SOUTH AMERICAN AGENT,
 Alfredo J. Eichler, 666 Calle Cangallo, Buenos Aires, Argentine.
 CUBAN AGENTS,

For all Products Except Dixon's American Graphite Pencils
 Croft & Prentiss, Room 424 Lonja del Comercio, Havana.

THROUGH THE PANAMA CANAL

The steamer "Missourian" of the American-Hawaiian Line will probably be one of the first steamers to go through the Panama Canal.

On her, Dixon will ship one thousand pounds of freight for Los Angeles, thirty thousand pounds of freight for San Francisco, over one thousand pounds of freight for Seattle, Wash., and over two thousand pounds of freight for Honolulu.

ECONOMICS OF EQUAL SUFFRAGE

Mr. Roger W. Babson, author of *Babson's Reports* and lecturer on business conditions, has written to some length on the "Economics of Equal Suffrage," in which he tells us that as the women gradually acquire the vote, there will be much legislation passed in their favor. He refers to laws relating to the inheritance of property, exemption from certain forms and customs, and the further protection of women and children. Labor laws, which heretofore have been enacted *by men primarily for men*, will be enacted for women, all of which will result in higher commodity prices and increased taxation. Shorter working hours and safety appliances are good and are to be recommended, but both result in increased prices for manufactured products. Under equal suffrage, the women on our farms will receive attention heretofore undreamed of, which will still further increase the price of food products, unless we get busy and compensate therefore by using new labor saving devices.

But by far the most interesting will be the effect of the woman suffrage movement upon dress, millinery and other lines depending upon constantly changing fashions. History shows that as man has acquired independence he has dressed more simply and has gradually standardized his clothes. Mr. Babson believes that as the development of the equal suffrage movement in England and other nations has been accompanied by a growing simplicity of dress among its followers, that that tendency will increase for which we men who are obliged to stand the millinery and dress bills of our wives and daughters will be thankful, if Mr. Babson's judgment shall prove true.

Mr. Babson says that as our ancestors forsook their wigs, ruffles and gay dress after they acquired independence, so it is very probable that today may be witnessing the height of woman's folly in useless hats and gowns. What the economic effect of this great saving would be, is almost beyond comprehension. It may offset the increase in prices which the legislation above referred to would ordinarily necessitate.

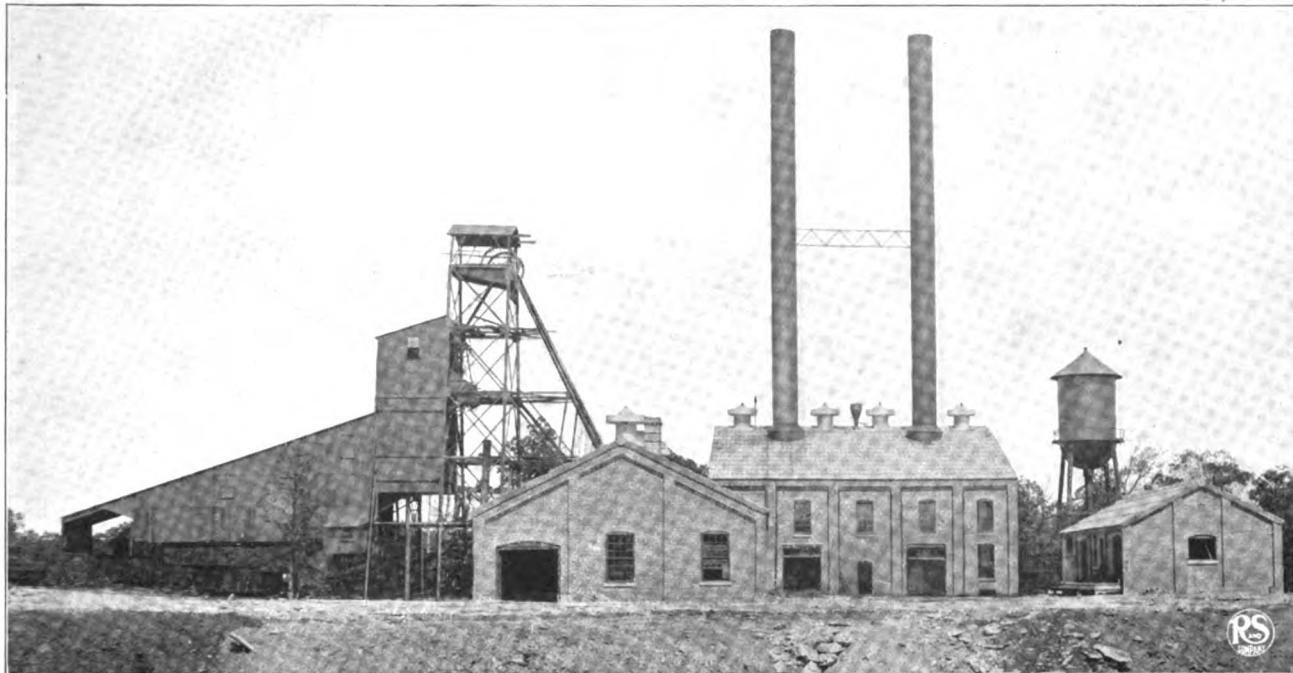
Mr. Babson further tells us that unless some such change takes place, the American woman will become extinct. Our daughters are of little use today. They produce nothing and demand much. When married they insist upon commencing housekeeping on a scale reached only by their parents after a life of effort. From the beginning they must have maids and conveniences which are both uneconomic and deteriorating. Their time is given to "bridge" and "tangoing," while their one child is being brought up by servants.

WHY IS THIS, READERS?

Mr. J. H. Lewis, manager of the Atlanta branch of the Dixon Company, says that a friend of his who recently acquired a farm in South Georgia is worried because of the color scheme of things and that his friend has not been able to figure out how a red cow that eats green grass gives white milk that makes yellow butter.

Later on he may wonder why it is that a horse eats corn and grows hair, a hog eats corn and grows bristles, a coon eats corn and grows fur and chickens eat corn and grow feathers.

DIXON'S graphite publications sent free upon request.



UNITED COAL MINING COMPANY, CHRISTOPHER, ILLINOIS

The accompanying illustration is a general view of Mine No. 2 of the United Coal Mining Company's plant at Christopher, Ill. This plant is built over a mine intended to have an ultimate capacity of 4000 tons per day—equal to the largest now in the state. The plant itself is the largest in Illinois. Its equipment includes, as may be seen in the illustration, a four-track steel tipple, containing the largest shaker screens in Illinois. The combined boiler, engine and generator plant (near the center) represents the most advanced practice in power plant construction. The plant was designed and built throughout by Roberts & Schaeffer Company, Chicago, and is protected by Dixon's Silica-Graphite Paint, including smokestacks, water tower, etc.

GRAPHITE MINES AND MINING

Probably we can in no better way answer questions that come to us almost daily than to quote Mr. Edson S. Bastin in *Mineral Resources of the United States*.

"There are more abandoned graphite mines and mills in the United States than the number in operation. The number of times that some of these properties have changed hands in the course of a few years evinces a record of misrepresentation and disappointment that can hardly be equaled in any other branch of mining, and many properties have been notoriously associated with stock manipulations of doubtful character. It should be clearly understood by anyone who contemplates the development of one of the flake graphite deposits that the technology of concentrating such material is yet in its infancy; that there are no well established systems of treating the materials such as exist, for example, for the treatment of gold or copper ores and that the product obtained is variable in quality and in market value and subject to severe competition with foreign graphite. . . . In general the cost of producing flake graphite is so high and the price at which it is sold so low that even under the most economic conditions the

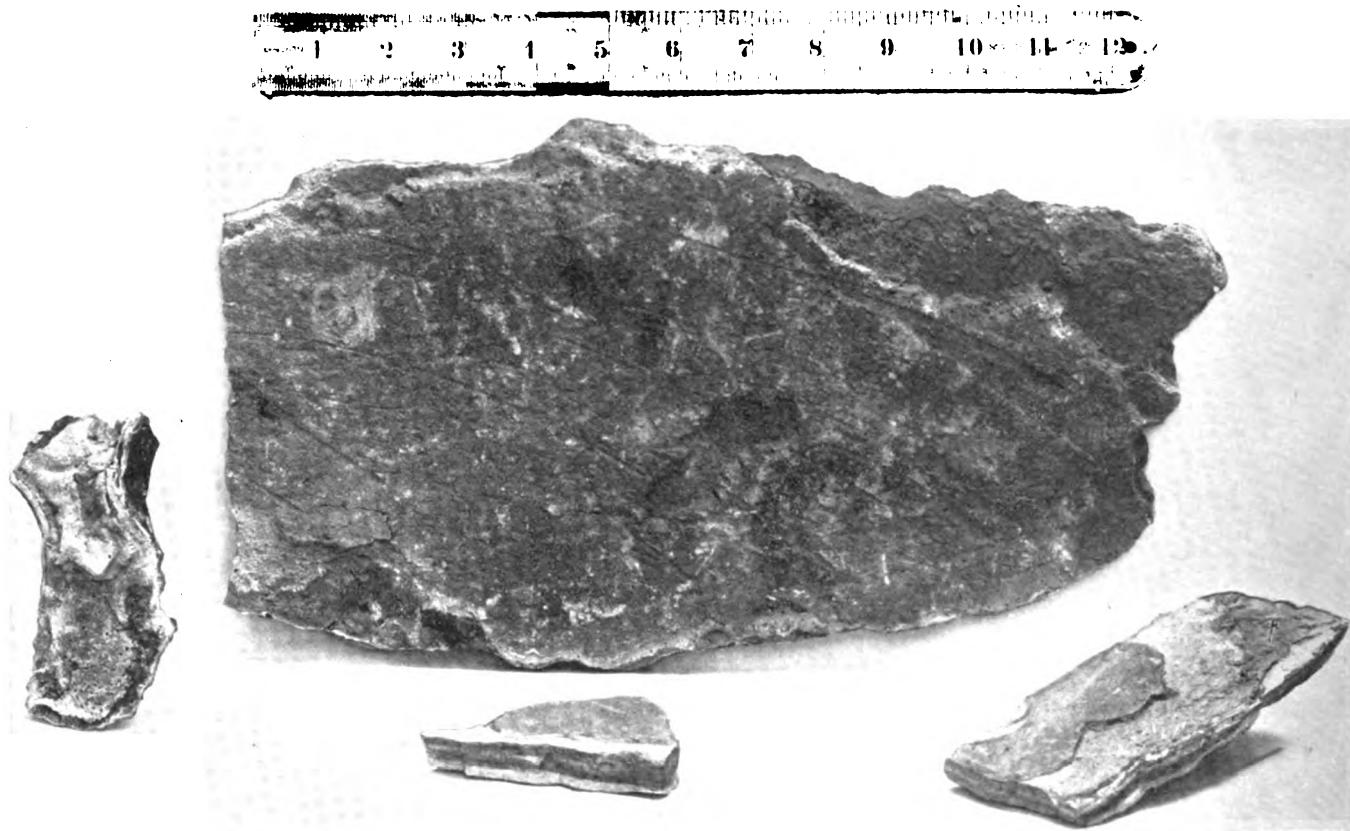
margin of profit is small. Moreover, certain rocks that carry graphite contain other minerals in such intimate association with the graphite as to preclude any possibility of successful concentration—such, for example, are rocks in which graphite flakes are interleaved with mica—and a careful study of the material by an expert should precede any attempt at development."

THE SETTING SUN

When, wheeling round, in hot
Pursuit, the sun sinks low,
And night, like widow's weeds,
Descends upon the East,
One-half the globe regrets
His doom; but what, O what
A contrast there, for lo!
The sun that sinketh here,
Old, worn and grave, doth rise
Again, a new born orb,
A ball of golden light,
To fill the West with gleam
Of morn that spreads into
A day, recalling all
To duty round of life.
Such is man's life below;
He quits his earthly home
And friends lament his fate;
But freed from mortal ills
He is exalted to
An elevated sphere,
Where lasting bliss abides
And death himself is dead.

—A HINDOO in *New York Herald*.

"JUST AS THE politicians come from the people, so do our customs and morals, the common law of business, come from the people."



CONCERNING THE REMOVAL OF SCALE IN LOCOMOTIVE BOILERS

The above presentation of what happens in the boiler of a locomotive after it has been treated with Dixon's Boiler Graphite, is graphic enough for even the few engineers who still cling to the fashion way of removing scale from boilers.

This illustration in connection with the following text is from the *Railway Gazette*, the London edition of the *Railway Age Gazette*:

"Everyone knows that to some extent all undistilled waters used for feeding steam boilers contain impurities, either in suspension or in solution. Everyone knows, too, just what happens when the impurities collect on the boiler shell and tubes in the form of scale or soft mud. In sufficient quantities the deposit will affect the steaming properties or even seriously imperil the safety of the boiler.

"Graphite of the right kind will prevent the firm adherence of scale on the surfaces of the shell or tubes of a boiler. The action of graphite, such as Dixon's Boiler Graphite No. 2, is not chemical; it does not dissolve the scale nor does it attack the metal, as is often the case with strong compounds; neither is it affected by any acids in the water nor by the heat generated in the boiler. The particles of graphite simply work into the minute cracks existing in the old, hard scale, and gradually penetrate between the scale and the metal. The scale thus loosened may be rapped off or otherwise removed without trouble. A piece of scale so removed from a boiler of an English railway locomotive is illustrated herewith. Further scale cannot adhere firmly to the metal again so long as the graphite treatment is continued, the graphite becoming thoroughly intermixed with new scale as it forms, rendering it soft and crumbly."

A copy of the booklet, "Graphite for the Boiler," will be sent free upon request to any one interested.

BROADWAY JEWELS

We do not refer to the jewels seen on the beautiful women nor to those flashed by men, but to those found under the surface of the thoroughfare. In a paper recently written by James G. Manchester and now on file at the New York Mineralogical Club, we are told that while, since 1814 Broadway has been known as a mineral production area, it was not until the advent of the giant structures that the real extent of its worth was realized.

There are known to be 118 varieties, or eighty-two species; among them is graphite.

"THE more glue the stronger" is a mistaken idea, and it is equally a mistaken idea to think that the more flake graphite, the better the lubrication. Flake graphite serves a strictly mechanical purpose. It fills up the irregularities of the bearing surfaces, forming a veneer-like coating and making a graphite-to-graphite contact instead of permitting a metal-to-metal contact; therefore, only sufficient flake graphite should be used to accomplish this purpose. Then you have ideal bearing surfaces.

It is better to use too little rather than too much. If the graphite is being introduced into a hot bearing, the application should cease as soon as the bearing begins to cool.

"WHAT MAKES men of business gasp is to remark the assurance with which the men of government assume to teach methods of efficiency to men who must be efficient or perish."



STANDPIPE, LANCASTER, PA.

Lancaster is one of the important cities of Pennsylvania. Its superintendent of the Department of Water, Mr. E. K. Saylor, is a gentleman who believes that "a stitch in time saves nine," which is an excellent policy for a wide awake municipality.

The above illustration shows the attractive standpipe at Lancaster, which for years has been protected with Dixon's Silica-Graphite Paint.

We quote Mr. Saylor's letter as follows:

DEPARTMENT OF WATER

City of LANCASTER, June 18, 1914.

*Joseph Dixon Crucible Company,
Philadelphia, Pa.*

GENTLEMEN:—Received your quotation and thank you for your prompt reply. The enclosed picture is a late one of the Lancaster City standpipe which will be painted two coats outside; the last painting was made in 1911. It is in good condition, but it is the policy of this department to keep it good.

Very truly yours,

DEPARTMENT OF WATER,
(Signed) E. K. SAYLOR, Supt.

Dixon's Silica-Graphite Paint, made in four colors, is not only a *longer service* paint for all metal work, but an attractive paint as well. It is used by water companies, railroads, gas companies, etc., all over the country.

Are you a user in the line of economy and satisfaction?

ALGEBRA TEACHER—"What does 'X' stand for?"

PRECOCIOUS PUPIL—"Flour, kisses and the spot where murders are committed."

OUR NATIVE COUNTRY

To some it seems inexplicable that we who have come from foreign countries, who have settled and made homes in the United States, should answer the call of the fatherland in war time, or even if we do not answer the call, respond to it in every fibre of our being. No matter where we may be, nor how far from the fatherland we are, the call is heard and felt.

At such times the house where we were born, the country in which we went to school, the places where we took our first steps, the trees, the meadows, our old time companions and all we hold dear in our memories, are pictured in our minds and draw us there.

Sweet memories there are of our mother country that supported our parents when living, and covered them when dead. Again is heard the language in which our mother consoled us in our first griefs and in which she taught us to call to our father on earth, as well as to our Father in Heaven. The language in which we uttered for the first time the names of those who gave us being. How natural it is to love one's country!

A REMINDER

Mr. Allen Loomis, of the Packard Motor Car Company, writes us as follows:

"The soliloquy of the pencil reprinted in your last number, reminds me of the limerick which was printed in Gillett Burgess's magazine, *The Lark*, years ago. I have not seen it in your magazine, and therefore, at the risk of repetition, give it below.

'Although I am your tool, I'll be nobody's fool,
I'll be firm for I am a utensil,
Do you see my point clear,
I must draw the line here,
For I will not be lead, said the pencil.'

"Your house organ impresses me as being one of the most efficient that comes to my office."

We thank Mr. Loomis for his courtesy in the matter and shall always be glad to receive any comment from readers of GRAPHITE.

THE WAR which is now raging is the direct result of the military elements of the various nations involved, striving to justify their existence.

The world has now reached a stage where the cost of war is so tremendous as to wipe away in a few weeks time the accumulated wealth of decades, to say nothing of setting back our civilization by a great many years. In view of the unrest prevailing, it would seem that the world needs an occasional reminder of the horrors of warfare. A great conflagration gives us new laws guarding against repetition of the disaster. A great shipwreck gives us new rules for safety at sea.

The conclusion of the present European war may mean the commencement of the greatest era of peace that the world has ever before experienced.—BABSON.

"STATUTES never have made a people prosperous or moral, and yet our politicians think that their rules will succeed where the Ten Commandments have failed."

CAMPANILES AND PROTECTIVE PAINT

What is a campanile? Many persons asked this question when the famous old campanile of St. Mark's Cathedral in Venice fell some years ago.

A campanile is a high belfry tower built separate from a structure, of which it forms a part of the consistent grouping. Italy is the home of these unique adjunct-towers, as we might call them. Not only Venice, but Florence, Bologna and Milan boast of their campaniles, and of course every school boy has read of the famous "Leaning Tower of Pisa," which is a campanile.

America has only one campanile that we know of; the one we illustrate, the Sather Campanile, is now being built on the Campus of the University of California at Berkeley, Cal.

The Sather Campanile ranks with the great towers of the world, being 312 feet 7 inches in height, and when completed will cost \$250,000.00. The light in the lantern will be visible many miles out to sea and the tower is in direct line with the Golden Gate, from which it is distant about twelve miles.

The 500 tons of steel required is protected by Dixon's Silica-Graphite Paint, applied by W. B. Kyle, San Francisco, manager for the McClintic-Marshall Company of Pittsburgh, Pa., who were the steel contractors.

The completion of the steel work was celebrated by a banquet on the belvedere floor of the tower, at which unique dinner President Wheeler of the University of California was the honor guest.

Fifty-five university officials and constructors partook of the highest-up banquet ever served on the Pacific Coast.

WHAT IS A PHOT?

Scientists make use of some peculiar terms of which the ordinary layman seldom hears or knows the meaning. Among these, mentioned in the *Electrical World*, is the recently proposed unit of light intensity, the "phot," which is the illumination produced at one foot from a light source having an intensity of 929 candle power.

SPANISH WORDS AND PHRASES

Now that merchants and manufacturers are turning their eyes toward Latin-America for increased business, there will be many who will become interested, to a more or less degree, in the Spanish language.

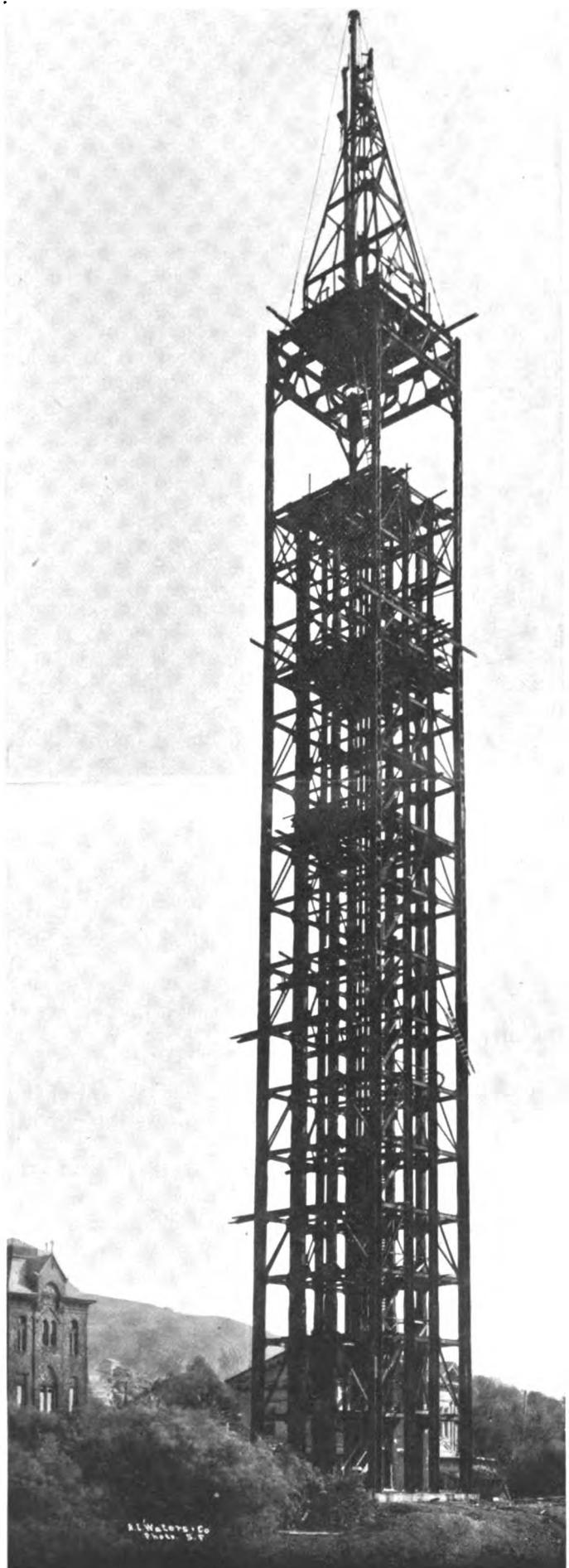
The Joseph Dixon Crucible Company has lately issued a little pamphlet entitled, "Useful Spanish Words and Phrases." The little pamphlet is simply intended as an aid to those who desire to make their wants known and is not intended as a treatise on the Spanish language.

A copy will be sent to anyone interested by addressing the Joseph Dixon Crucible Company, Jersey City, N. J.

ANOTHER WORLD'S RECORD

From Saludo, Utah, on August 12, Teddy Tetzlaff wired: "Broke world's one-mile record with Blitzen Benz to-day on salt beds—twenty-five and one-fifth seconds. As usual, Dixon's Graphite Automobile Lubricants were used."

DIXON's graphite publications sent free upon request.





ROYAL MAIL STEAM PACKET COMPANY'S BUILDING, KINGSTON, JAMAICA

This handsome building houses two cable companies, as well as the offices of the Royal Mail Steam Packet Company. It replaces buildings destroyed by the lamentable earthquake of January, 1907.

A very interesting feature is that the construction rests upon a ferro-concrete raft, with flanged beams and inverted reinforcement, designed to withstand possible upward shock from earthquake.

The steel work is protected by Dixon's Silica-Graphite Paint, which is much used in the tropics and semi-tropics to prevent corrosion from any cause.

The architect of this graceful building, which follows the loggia or veranda style, suited to the hot tropics and sub-tropics, is the well known Lionel V. Grace, Esq. (Fellow of Royal Institute of British Architects), of 114 Queen Victoria Street, London, England.

A SIXTEENTH of an inch of scale on the interior of a boiler will cause a loss of thirteen per cent. fuel efficiency.

—*Evening Mail.*

The Dixon Boiler Graphite is becoming more and more popular with engineers as a scale remedy and if you have not read our booklet "Graphite for the Boiler," it will be money in your pocket to get a copy at once.

GRAPHITE AFTER VALVE GRINDING

It is said that the use of dry graphite for finishing the work of valve grinding is decidedly beneficial, as a fine surface is obtained on the seat and valve proper. The graphite is utilized after the grinding is completed and the seat and valve should be wiped dry before using the material.

—*Accessory and Garage Journal.*

"WANTED—the man who will accept the responsibility for the things he can do and do them; for the things he cannot do and get them done."

When asked how near the truth we thought the above came we said we would put it this way:

"WANTED—the man who will accept the responsibility for the things that he criticizes and do them the way he says they should be done."

Frequently a man will make a kick to the management about something and then tell how it should be done, but if the management puts it up to him to accept the responsibility and do it in the way it should be done, nine hundred and ninety-nine times out of a thousand he backs out, and sometimes when he does not back out and undertakes the job, he will come back and lay it down and acknowledge that "probably the other fellow did it about as well as it could be done."

DIXON'S graphite publications sent free upon request.

THE POWER OF PUBLIC OPINION

America is today as Germany was nearly forty years ago. We in America have not that intangible but none the less concrete force which exists in Germany, the voice of "authority."

There is no "authority" in America—we have no Kaiser, no Bismarck, no Solon, no Moses. Each of us is his own sovereign, his own Bismarck, and we may almost add, his own law giver.

But in place of "authority" we do have an intangible but very real power in the force of "public opinion." We are asked to help create public opinion. We are asked what we are going to do with this matter of an American National Marine League. We are asked if we are going to lightly regard it as one among many of more or less interesting topics, or if we are going to regard it as the one great thing to be done for America.

Agriculture and industry are firmly established in America, but how about foreign commerce or the art of selling things we grow? A country that can only sell five per cent of its products to outsiders is but on the threshold of its commercial expansion, and that is America.

Germany sells forty-five per cent of its manufactures, while America sells only five per cent. There is as much need, if not more, of America having a foreign commerce as there was for Germany to seek export trade. Germany was not so entirely dependent upon the water to extend her foreign business as is America.

It is only through the force of Public Opinion that America will be enabled to have a merchant marine. Practically speaking, today every dollar's worth of foreign commerce possessed by American manufacturers must leave our shores in foreign ships. Foreign countries have shut us out from foreign trade except that we use foreign ships. Not only must we make use of foreign ships—we must make use of foreign banking facilities abroad, and Americans may be sure that American manufacturers will only get what foreign manufacturers, like those of England and Germany, overlook. In South America, our nearest foreign neighbor, we find only foreign ships and foreign banks.

America can only get a merchant marine in the same way that Germany got it,—by the insistent demand of the population at large on the all-impressive argument of "the general good of the nation." There is in the United States a National Marine League which is doing for the business interests of the country that which no business associations can do for themselves in their own name. They are trying to get all the people interested, the mill owners, the laborers, the manufacturers and all sorts and conditions of men in the far interior—people who have never seen and may never see salt water in all their lives. To the voice of such people must be added the heavy-weights,—the big manufacturers, the bankers and the strong men who do things.

THE DIXON GRAPHITE LUBRICANT LAWS

1. It is generally recognized that there are two kinds of friction.
 - (a) Friction due to contact of metal parts;
 - (b) Friction of the lubricant itself.
2. Any bearing surface shows under a magnifying glass microscopic irregularities. When in motion, these coming in

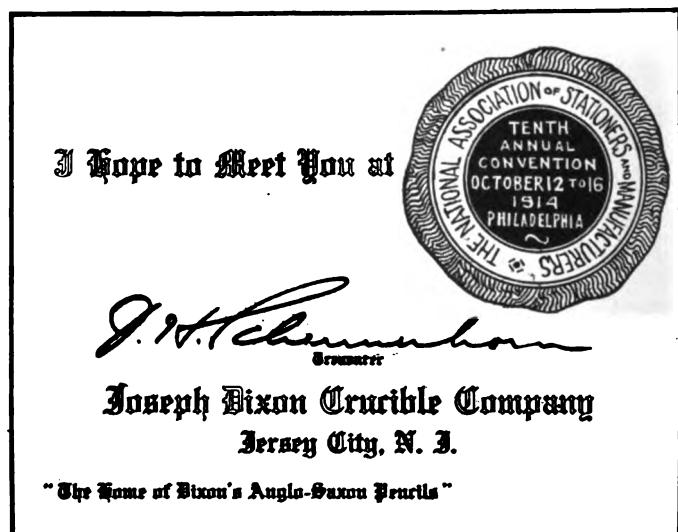
contact cause friction or wear. A liquid or semi-liquid must have enough body to keep the metal surfaces apart, even under most exacting conditions, and unless the lubricant is one of very high viscosity, that is, having a high friction within itself, the metal surfaces will not always be kept from contact.

3. Dixon's Ticonderoga Pure Flake Lubricating Graphite becomes attached to the bearing surfaces, building up over them a thin, tough, highly unctuous coating; thereby substituting the low-frictional contact of graphite-to-graphite for the high and destructive frictional contact of metal-to-metal.

4. If dry graphite could be applied evenly and as wanted, the question of friction would be a very simple one. Unfortunately graphite is so light that it cannot be evenly distributed, and for this reason it is necessary to use a carrier (oil or grease) to properly distribute it. By the judicious use of the Dixon Flake Graphite, an oil of very much lower viscosity can be used than would be required for the same kind of work under ordinary conditions, without graphite. One of its principal advantages is that it permits of thinner oils being used. This is the principle which the Dixon Company has incorporated in their graphite grease. For instance, the Dixon Graphite Cup Grease No. 3 will be found much lighter in body than the ordinary cup grease without graphite, and those who use it for the first time are sometimes apprehensive that the grease will be too light; but really are surprised when they give it a trial, to find how so light a grease as the Dixon Graphite Cup Grease No. 3 will stay in grease cups, at high temperatures, where very heavy bodied plain greases run away.

MEET HIM AT PHILADELPHIA

The time is from October 12th to October 16th, 1914. The place is Philadelphia. The occasion is the Tenth Annual Convention of the National Association of Stationers and Manufacturers. And the man who hopes to meet you is Mr. J. H. Schermerhorn, Treasurer of the Joseph Dixon Crucible



Company. The invitation is reproduced in GRAPHITE, because the Dixon Company wants all of its friends and acquaintances to know that Dixon's Anglo-Saxon Pencils are to be represented and because it wants you to make the acquaintance or to again meet "The Man from Home" who represents them. Will you be there?

FOUR SCORE AND SEVEN

Eighty-seven years ago Joseph Dixon began his manufacture of Dixon's Plumbago Crucibles, Stove Polish and some other graphite productions. Less than ten years later he moved to Jersey City and started his factory, which today covers over one hundred city lots and employs hundreds of people year in and year out.

At that time New York City was very small and had limited transportation facilities and business capacity compared with that of the present great city, and second largest in the world.

When the Dixon factory was started in Jersey City, New York City had about 120 carriages in service, and the general fare within the city was twelve and one-half cents. It cost twenty-five cents to go up to Harlem. The number of persons who rode daily were said to be about 25,000, Sundays excepted, when the horses were allowed to rest. In those days the Wall Street bankers, after staying until three o'clock to settle money affairs, would take advantage of the Broadway omnibuses; otherwise they would be late to dinner if they were obliged to walk or would be obliged to pay from three to four shillings for coach hire.

The dining hour in those days was from twelve to three, and during those hours the stages were most apt to be crowded. In fact, it is said that during those hours people sometimes stood at the corner of a street beckoning to all stages that passed for half an hour and yet would not be able to obtain a seat.

Today the transportation companies in New York City handle more than 5,700,000 people daily.

It is said that the present subway has transported 2,198,000,000 people in the past nine years without a single passenger fatality and that the rates of speed and frequency of this train service are unsurpassed anywhere. The capacity of the original subway has been increased from 400,000 passengers per day to 1,200,000 per day, operating over 200,000 car miles per day. It maintains 141,000 electrical horse power, for the generation of which it consumes 800 tons of coal per day or 292,000 tons yearly.

It has eighty-five miles of highly developed roadway, equipped with the original and most complete speed control automatic train signal system. There are 2,000 automatic stop signals in the subway, operating approximately 200,000,000 times per year.

It also maintains a complete private telephone system, consisting of 1550 telephones, 8,000 miles of cable and handles 16,000 calls daily.

It maintains for the benefit of its employés well appointed training schools for mental development with welfare departments for the physical and moral development; a military band of 117 pieces; dramatic clubs; a private baseball park and tennis courts; a baseball league of eight clubs; football teams; recreation rooms with shower baths, terminal restaurants, etc.; sunshine committees; a system of provision stores, mutual benefit associations, and an employés' monthly magazine. This is the Interborough Rapid Transit Company.

ATTACK is the reaction. I never think I have hit hard unless it rebounds.—DR. SAMUEL JOHNSON.

DIXON's graphite publications sent free upon request.

MY DIXON PENCIL

I have traveled pretty much about the towns and cities and country places of this old earth and I have sought in vain for the statue of the fellow who invented the pencil. His face and form should be preserved in deathless bronze or marble in every crossroads place and in every place where people come and go.

We live and grow through a process of exchanges.

Nobody says anything absolutely new. We just change things around, add to or combine, and the world gets our viewpoint and our little lesson as a sort of contribution to what it already has.

And the pencil is the little fellow that trots along with us and acts as our secretary and recorder of what others thought and what we think. Are you taking advantage of *your* Dixon Pencil? Do you carry *your* Dixon Pencil with you as you do your pocket knife or your handful of coins? If you don't, why don't you?

There is only one way to read a book and that is with *your* Dixon Pencil. There is only one way to hear a great mind talk and that is with *your* Dixon Pencil. There is only one way to see the whole world and that is with *your* Dixon Pencil.

A little paper—and *your* Dixon Pencil. Take them with you everywhere. You are not getting but a fraction of what may be yours if you allow your mind to wander and roll in its bed outside the hours that it is actively and definitely engaged during business or even pleasure. As you move about—THINK. And put *your* Dixon Pencil to work. And keep it to its job.

Your Dixon Pencil has, or should have, a place akin to your loaf of bread.

IF

(After Kipling—A Long Way After)

If you can laugh when others weep,
If you can work while others sleep,
If you can lose and never kick,
But start again and gamely stick;
If you can face defeat and grin
Nor grumble if you never win;
If you can see things go to pot
And never get your collar hot,
But take it all with perfect grit
And scorn to curse a single bit;
If you can bear a heap of pain
And scarcely murmur or complain;
If treachery and lies and such
Can never phase you very much,
And all through life you don't descend
To knife a foe or knock a friend;
If you can keep your life thus high,
Believe me, you will be *some* guy,
And I'll admit quite frank and free,
You'll have an awful bulge on me!

—BERTON BRALEY.

"WHEN GOVERNMENT does not know what to do, it should do nothing, just as a man who doesn't know what to say shouldn't say it."

GRAPHITE AS A LUBRICANT FOR AUTOMOBILES AND BALL BEARINGS

Address delivered before the New York Section of the Society of Automobile Engineers by

A. GALE THOMSON

Associate of the Society and Member of the Dixon Staff

It is unfortunate that the average man is not more interested and better informed relative to the theories of lubrication. In technical schools this subject is one which the average student passes over as requiring little attention and as possessing more mystery than any other subject with which he has to deal. This is not only true of oils and greases in general, but especially true of graphite.

Graphite is a mineral and one of the natural forms of carbon. The origin of graphite is not definitely known, although it was probably formed by the distillation of vegetable matter.

Graphite varies in quality from that possessing but little lubricating value to that which is extremely valuable as a lubricant. Many conditions determine the commercial value of graphite, such as physical formation, ability to resist heat, unctuousness or lubricating quality. These determine the use to which the particular graphite is best suited.

Graphite enters directly or indirectly into practically every known manufactured product. The largest fields for the use of it are lubrication, the manufacture of crucibles, foundry facing, electrical apparatus, electrotyping, the manufacture of paints, pencils, stove polish, etc. A graphite which is suitable for one or more of these uses may not be suitable for any of the others, and this is an important point to remember. For instance, graphite for crucibles must consist of flakes which are heavy and tough and with surfaces that are fibrous or irregular to enable them to anchor in the binding material used.

Low grade or amorphous graphite is found in practically all countries. The cost of refining this grade is sufficiently high in many cases to prohibit economical working of deposits.

Graphite is also known as plumbago and black lead; plumbago being the term used by customs officials with reference to the foreign grades, principally received from Ceylon, and the term black lead being applied to the cheaper or inferior grades.

There has been much opposition to the use of graphite as a lubricant. Not many years ago an American railroad company enacted a rule that engineers using graphite on its locomotives would be discharged. Today, however, this railroad purchases large quantities of flake graphite for lubricating purposes. The Delaware, Lackawanna & Western Railroad conducted experiments which proved that the use of a small amount of flake graphite in locomotive steam cylinders increased the efficiency of the locomotives to the extent of saving a great many thousand dollars per year in fuel.

When two metal surfaces are brought in contact, the minute irregularities interlock and act to retard motion. Lubricants are intended to reduce friction by preventing the actual contact of metallic surfaces, thus substituting the lower friction of the lubricant.

Oils and greases are the two best known reducers of friction, but flake graphite possesses qualities not shared by either oil or grease. In the first place, it overcomes in a measure the specific cause of the friction, the microscopic roughness, by

filling in the depressions, forming a smooth, tough, veneer-like surface on the metals. The efficiency of oils and greases is much affected by varying conditions of temperature, pressure and velocity. The ideal condition is, of course, that in which the lubricant used has the least viscosity necessary to keep the rubbing surfaces apart, but in attempting this there is always danger that the varying conditions may reduce the viscosity to the point where the lubricant cannot support the load. This danger entirely disappears when flake graphite is used in connection with oil and grease, as metallic contact cannot occur when it is present.

Graphite exists in two forms: crystalline or flake, and amorphous. The distinguishing characteristic of graphite is its quality of unctuousness. All graphites have this quality more or less, the crystalline form being better in this respect than the amorphous, for the reason that when a graphite crystal is subdivided the cleavage surface is smooth, while with amorphous graphite the line of fracture is irregular and rough; only when these irregularities are worn away does the amorphous graphite become smooth.

A true lubricant has been described by some who advocate the suspension of graphite in oil as "a body that will subdivide so that all movement will be within itself and not between it and the adjacent metal;" also, that a perfect suspension of graphite and oil "is of a nature that permits of slipping within its own mass without any expenditure of energy that will produce high temperatures."

This definition of a true lubricant is an excellent one and perfectly describes a liquid or semi-liquid substance where the material adheres to both friction surfaces and where the particles of liquid are in constant movement one on the other. No stretch of imagination can enable us to conceive of such a condition when considering graphite, which is a solid substance, considerable force being required to separate its minute particles.

A mixture of graphite suspended in oil, as indicated above, has no particular advantage over a non-graphite oil as a lubricating material, because the particles of graphite, being in suspension, cannot break through the surrounding film of oil and become attached to the metal surfaces. They simply move about in the oil film without at all decreasing the viscosity of the oil, which is the only way any reduction of friction can be brought about. In fact, a mixture of finely divided graphite and oil has a higher viscosity than that of oil alone.

Taking the viewpoint that the individual particles of both oil and water are solid, and that the specific gravity of graphite is greater than that of water or a light oil, it will be necessary to have the particles of graphite very small in order to hold them in suspension in water or light oil. If the larger particles of oil or water will not keep the friction surfaces apart, how can the smaller particles of graphite be expected to perform this function?

In all friction surfaces, the irregularities are both above and below the normal surfaces. It is the irregularities above the normal surfaces that cause friction. It is important that whatever surfacing material is used, it should be able to build up the surfaces to the level of the high points rather than to simply fill up the minute pores of the metal. It is not conceivable that any particle of graphite small enough to go through a filter paper could become impaled on one of these projecting peaks, but such a result is entirely possible where

broad flake graphite is used. Everyone knows how difficult it is to sweep up a small flat piece of paper, like confetti. The same reasons that cause the paper to adhere to the floor cause the graphite flakes to adhere to the surfaces which it is intended they shall lubricate.

A chemical analysis is not the best test for flake graphite that is to be used as a lubricant, because when it is burned a residue of mica is left after all of the graphitic carbon has been consumed, and experience has shown that this mica material left as an ash does not detract from the lubricating value of the graphite. Structure, size of particles, cohesiveness, character of impurity and other physical properties bear the real important relation to lubricating value, not mere high percentage of carbon.

In some tests conducted by Professor Goss, using both amorphous and flake graphite with kerosene as a carrier, the latter was proven superior. When kerosene alone was used as a lubricant, with a pressure of fifty pounds to the square inch, the addition of amorphous graphite did not permit the load to be increased, although the friction was reduced about twenty per cent. When flake graphite was used with the oil, the load was increased to 120 pounds per square inch and the friction reduced almost fifty per cent.

I want to emphasize that I do not recommend graphite as a competing product with oils and greases, but rather as a substance which increases their lubricating properties. The lubrication of ball and roller bearings on semaphores of railway signal systems is interesting in this connection, in that they are lubricated with dry flake graphite alone, no oil or grease being used. Professor Goss conducted some elaborate experiments with graphite as a lubricant for ball bearings. His conclusions are as follows: "A combination of graphite and lard oil makes up a lubricating mixture which, when applied to ball bearings, will accomplish everything which lard oil will do and which at the same time will give a lower frictional resistance of the bearings and permit a large increase in the load which it may be made to carry. An oil as light as kerosene, when intermixed with graphite, will be converted into an effective lubricant for ball bearings when operated under light or medium pressure. Even so viscous a lubricant as vaseline will better perform a given service in the lubrication of ball bearings when supplemented by small amounts of graphite. The bearing to which the mixture is applied will work with less frictional resistance and will carry a heavier load than when vaseline is used. The admixture of graphite with either a liquid or viscous lubricant serves both to reduce the friction and to increase the possible load which a bearing thus lubricated can be made to carry."

Almost every engineer is ready to admit that for plain bearings graphite alone or combined with the proper carrier is very satisfactory, but takes the stand that it is not so well adapted to ball or roller bearings. I have heard many engineers state that graphite will pack in the ball races, obstruct the balls, and spread the races and containers. This is true of amorphous graphite, but not of flake graphite, because when the latter is broken the cleavage surfaces are smooth.

All graphite is not lubricating graphite, nor is all lubricating graphite fit for automobile lubrication. Referring to motor lubrication, a percentage of graphite mixed with oil will increase compression, eliminate friction, and cause a considerable saving in oil. Most of the oil that is used is consumed

in the explosion chamber. If you increase the compression less oil will get past the pistons and rings into the combustion chamber.

PUBLIC ENEMIES

If you build a line of railway, over hills and barren lands,
Giving lucrative employment to about a million hands;
If you cause a score of cities by your right-of-way to rise,
Where there formerly was nothing but some rattlesnakes
and flies;

If when bringing kale to others, you acquire a little kale,
Then you've surely robbed the peepul and you ought to be
in jail.

If by planning and by toiling, you have won some wealth
and fame,
It will make no odds how squarely you have played your
little game;
Your success is proof sufficient that you are a public foe—
You're a soulless malefactor, to the dump you ought to go;
It's a crime for you to prosper where so many others fail;
You have surely robbed the peepul, and you ought to be in
jail.

Be a chronic politician, deal in superheated air;
Roast the banks and money barons, there is always safety
there;
But to sound the note of business is a crime so mean and
base,
That a fellow guilty of it, ought to go and hide his face.
Change the builders' song triumphant for the politicians'
wail,
Or we'll think you've robbed the peepul and we'll pack you
off to jail.—WALT MASON.

CHANGE OF COPY NEEDED

The small daughter of a Little Rock family had been praying each evening at bedtime for a baby sister. The other morning her mother, reading the paper, exclaimed: "I see Mrs. Smith has a little daughter."

"How do you know that?" asked the child.

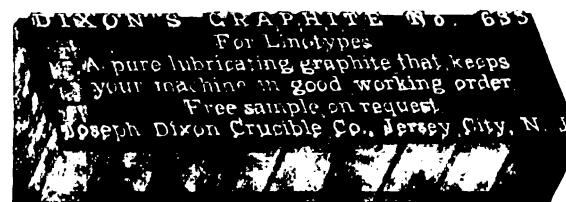
"I read it in the paper."

"Read it to me."

The mother read: "Born—on March—, to Mr. and Mrs. —— Smith, a daughter."

The child thought a moment, then said: "I know what I am going to do. I am going to quit praying and begin advertising."—*Little Rock Gazette*.

THE SECRET of the true scholar is this: Every man I meet is my master in some point, and that I learn of him.—*Emerson*.



90% Sell Service; the Rest Sell—?

90% of the garage men in New York City recommend Dixon's Graphite Lubricants. Why? Because they are selling honest service —100% service for every dollar charged.

A few of the remaining 10% don't know the value of Dixon Lubricants—yet. The rest don't sell service—they sell inferior greases, with inferior graphite that packs and clogs the gears; greases long on profit, but mighty short on lubrication. They are the few who will soon have the "For Rent" sign on their door.

But when a motorist stops at your garage and asks for a can of

DIXON'S Graphite Grease 677 For Transmissions and Differentials

you know that he has confidence in your ability to give him the highest value in service. He demands Dixon Lubricants because he knows they are the best lubricants for his car.

Dixon Lubricants knock out cold the deadly jinx of the motor car—Friction. Dixon Lubricants put Friction flat on the canvas and he's there when the bell rings. He can't come back. Dixon Lubricants go straight into the tiny pockmarks that are on *all* bearings, fill in the holes, and make a smooth, tough, veneer-like coating that absolutely prevents metal-to-metal contact.

The selected flake graphite used in Dixon Lubricants is the only graphite that successfully meets the severe requirements of automobile lubrication. It is not affected by heat or cold. It has an ideal thinness and flexibility. It cannot pack or ball up, because *it does not adhere to itself*.

Garage dealers who are eager to sell 100% service to their customers recommend Dixon Lubricants, because a Dixon lubricated car gives greater satisfaction and longer service than a car lubricated by an oil, grease, or an inferior graphite mixture.

**THE JOSEPH DIXON CRUCIBLE COMPANY
JERSEY CITY, N. J.**

ESTABLISHED IN 1827

Graphite

Issued in the interest of Dixon's Graphite Productions, and for the purpose of establishing a better understanding in regard to the different forms of Graphite and their respective uses.

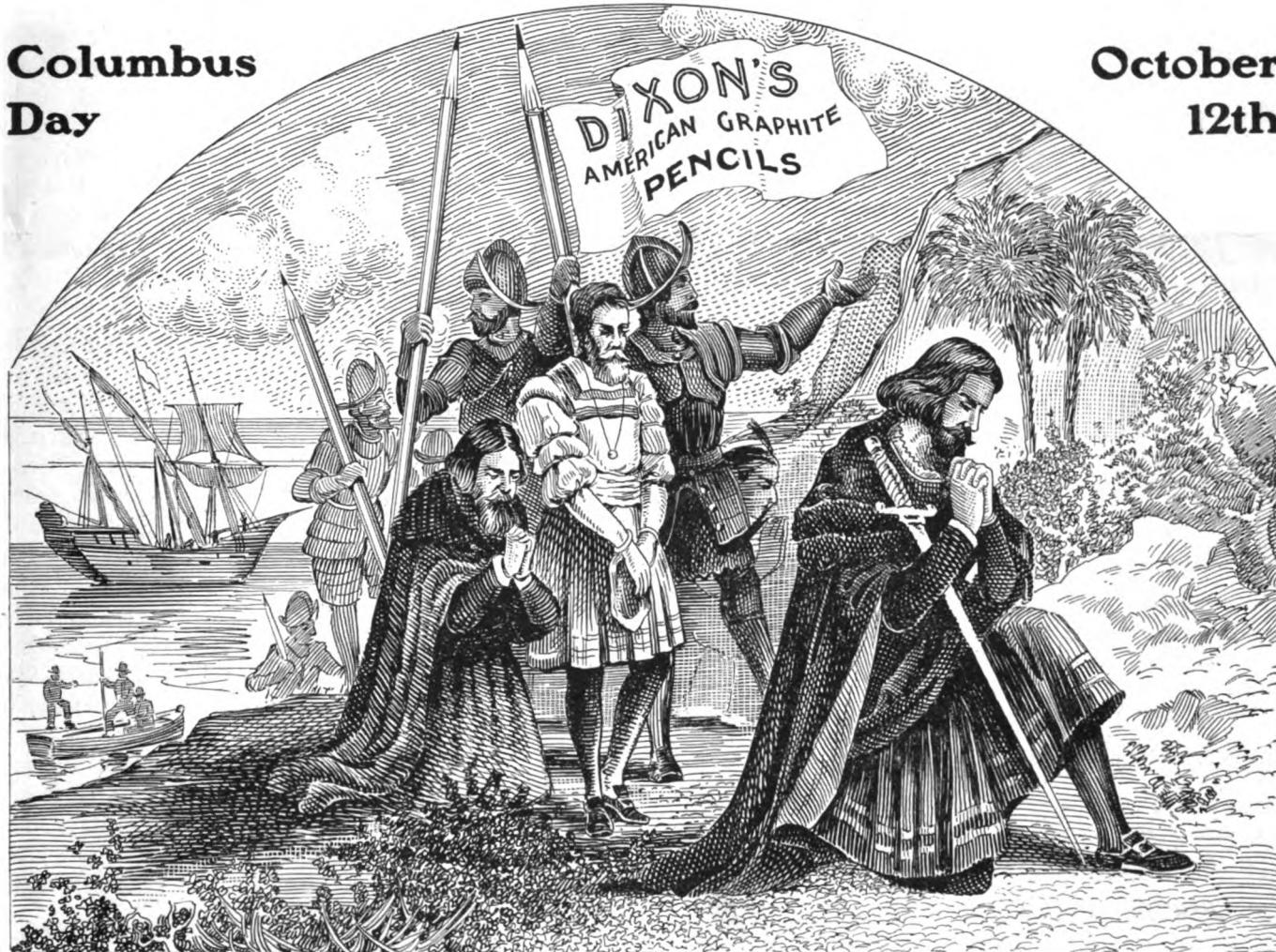
Vol. XVI

October, 1914

No. 10

Columbus
Day

October
12th



In imitation of old style wood engraving this picture is used to illustrate the new and fifth edition of Dixon's Pencil Geography. The booklet is a miniature model of the old-fashioned geography in common use forty or fifty years ago and is intended primarily for school use, although the information it contains relative to pencil production is of general interest. A copy will be mailed free upon request to any reader of "GRAPHITE."

ESTABLISHED 1827



INCORPORATED 1868



JOSEPH DIXON CRUCIBLE CO. JERSEY CITY, N. J., U. S. A.

**Miners, Importers and Manufacturers of Graphite,
Plumbago, Black Lead.**

OFFICERS:

President—GEORGE T. SMITH

Vice President—GEORGE E. LONG

Secretary—HARRY DAILEY

Treasurer—J. H. SCHERMERHORN

Ass't Sec'y & Ass't Treas.—ALBERT NORRIS

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OFFICES AND SALESROOMS:

NEW YORK SALESROOM, 68 Reade Street.

PHILADELPHIA SALESROOM, 1020 Arch Street.

SAN FRANCISCO SALESROOM, 155 Second Street.

CHICAGO BRANCH, 1323 to 1327 Monadnock Block.

BOSTON OFFICE, 347 John Hancock Building.

PITTSBURGH OFFICE, Wabash Terminal Building.

ST. LOUIS OFFICE, 501 Victoria Building.

BALTIMORE OFFICE, 616 Professional Building.

BUFFALO OFFICE, 72 Erie County Savings Bank Building.

ATLANTA OFFICE, Fourth National Bank Building.

EUROPEAN AGENTS,

Graphite Products, Ltd., 218-220 Queen's Road, Battersea, London.

SOUTH AMERICAN AGENT,

Alfredo J. Eichler, 666 Calle Cangallo, Buenos Aires, Argentine.

CUBAN AGENTS,

For all Products Except Dixon's American Graphite Pencils
Croft & Prentiss, Room 424 Lonja del Comercio, Havana.

EUROPEAN VS. AMERICAN SALESMEN

These days, when so much is being said about the United States going after South American trade in a vigorous manner, it may be of interest for our readers to know the opinion of a man doing business in South America; who has been doing business for a number of years there and who is very well posted on salesmen of various nations. He believes that foreign salesmen selling lubricants or other materials to the

machinery trade or to large consumers, have as a rule a better knowledge of mechanics, etc., than American salesmen. The reason for their superiority is the fact that it is very hard to get a real, high-class American salesman and engineer to stay permanently in the foreign field. As the conditions change in the United States and the opportunities become fewer, as is more or less the case at the present time in the European countries, there will be less difficulty in securing the high-class man for the foreign field, as they will be forced, as is the case of the European who is ambitious, to seek their fortunes and make their permanent homes in some foreign country. There is no question in my mind but that the American salesman is superior to the European, if each one is taken in his home country. In the foreign field, however, the American salesman does not seem to be able to adapt himself to the conditions as quickly as does the European.

"In the comparatively short time that I have been here in Argentine I have seen a great many American salesmen come and go, some being men of very great ability, and others who in my opinion would not be successful salesmen in the domestic market, where the conditions necessary to overcome are much fewer.

"I believe eventually that the United States will develop a large number of foreign salesmen who will be far superior to the European salesmen. However, this will take time, and when these salesmen are eventually developed it will be found that their greatest asset will be their ability to apply common sense to the problems which they have to solve. In other words, unless a salesman has got a little more than the average common sense, he cannot become a successful foreign salesman."

GRAPHITE AGAINST FURRING

"Various methods have been proposed and tried for preventing the furring of boilers. So far the best success has been obtained with those systems which prevent the deposition of scale right from its inception. In Germany many large firms of engineers, spinning mills, weaving mills, and other users of machinery, have found that graphite is a most efficient means to this end. The process is as follows: The walls of the tubes, owing to the different temperatures prevailing in the boiler, expand in varying degrees and fissures or splits are thus continually produced in the furstone as it forms, and, into these, the graphite penetrates and finally covers the whole wall of the tube so that scale is no longer able to adhere thereto. Of course, only highly pulverized, perfectly pure graphite must be used."

The above is taken from the *Scientific American*. Dixon's Boiler Graphite answers the specifications exactly, for it is a very finely ground flake graphite of very high quality. The list of concerns that use this treatment for boilers is rapidly growing, because the graphite does just what is claimed for it.

ACCORDING to the *Electrical World*, some people's fun will be spoiled as a motor-driven tell-tale device for party-line telephones has been patented, which will give conversing parties the location of any subscriber who may "listen in" while they are using the line. It is said that this is really a much needed device to stop the all-absorbing curiosity of some people to know what others are talking about.



DIXON'S SILICA-GRAPHITE PAINT IN BRAZIL

Para is the chief port of North Brazil and the Amazon, and it gives its name to the vast exportations of Amazon rubber.

Into this field the Dixon Company went many years ago, through its London agents, Graphite Products, Ltd.

The above photograph shows the great port of Para and eight of the galvanized iron dock sheds of the Para Construction Company.

The Amazon River Steam Navigation Company were the owners of some galvanized sheds at Para, which were taken over by the Para Construction Company in 1909, and which had been standing for some twenty years before that date and had been protected with Dixon's Silica-Graphite Paint during the whole of that time.

Five similar sheds, and two double deck sheds not shown in this photograph, altogether fifteen cargo sheds of the Para Construction Company at Para, Brazil, are now protected with Dixon's Silica-Graphite Paint.

The success of Dixon's Silica-Graphite Paint in tropical and semi-tropical countries, in both the eastern and western hemispheres, has long been established, and this is just one illustration out of the very many of important structures upon which it has rendered the "*longer and economical service,*" which the Dixon Company advertises. Humidity and heat have no terrors for Dixon's Silica-Graphite Paint.

AMERICAN FAIR TRADE LEAGUE

The American Fair Trade League has entered on the second year of its career with an enthusiasm quite in contrast with the modest attainments it had in mind when it was formed last June. At the annual meeting, it reviewed its doings as something like real history, and the addresses indicated much progress already accomplished in establishing its ideas in the public mind. Its star rallying point and chief monument is, naturally, the Stevens "price maintenance" bill.

The meeting was presided over by President Charles H. Ingersoll, who made a brief address outlining the work the league has already undertaken and accomplished. He pointed out that the activities of the league and of the individuals who worked along the same general lines prior to the formation of the league had been instrumental in raising the "One-

Price-to-All" proposition to the dignity of a leading national issue. That there is still a great deal of work to be done, he pointed out, was not surprising in view of the great difficulties inherent in such a far-reaching schedule of labors.

He expressed the belief that the experience of the past year had brought the work of the league into such definite form that the campaign for greater education and suitable legislation in trade matters would, in future, proceed most effectively and fruitfully.

Edmond A. Whittier, secretary of the league, presented a detailed report of the work of the organization since its formation. After outlining the situation a year ago, Mr. Whittier said that from the outset the league's constructive work has had four general sub-divisions—research, publicity, legislation and organization. While in some respects the results have been disappointing in regard to the research progress—due largely to non-existence of trade records—yet an immense amount of valuable data has been gathered and filed. Many of these facts have already been used in a publicity way and in testimony before the Judiciary Committee of the House of Representatives at Washington.

The Stevens bill, Mr. Whittier said, as drawn up by the legal committee and approved by Mr. Brandeis, has been characterized by the New York *Herald* and other newspapers as the "storm center of anti-trust legislation." It was introduced into the House by Congressman Raymond B. Stevens, of New Hampshire, on February 12, 1914, and has become the center of the activity of the league as well as serving as a concrete expression of its immediate purposes. As evidence of the popularity of the Stevens bill, Mr. Whittier cited that hundreds of trade organizations have passed resolutions favoring its passage.

WHAT'S IN A NAME?

"What is the name of your automobile?"

"I don't know."

"You don't know? What do your folks call it?"

"Oh, as to that, father always says 'The Mortgage;' brother Tom calls it 'The Fake;' mother, 'My Limousine;' sister, 'Our Car;' grandma, 'The Peril;' the chauffeur, 'Some Freak;' and our neighbors, 'The Limit.'"*—Life.*



MONONGAHELA INCLINE RAILROAD, PITTSBURGH, PA.

The above illustration was printed in the November, 1907, issue of GRAPHITE, at which time we called attention to the fact that Dixon's Silica-Graphite Paint, used upon this structure, had successfully withstood the severe atmospheric conditions of Pittsburgh, consisting of sulphurous fumes, gases, etc., for four and a half years.

The second application of Dixon's Silica-Graphite Paint protected the structure for seven years, showing the great advantages of repeated coats of this *longer service* paint.

This year the structure has again been painted with Dixon's Silica-Graphite Paint, and we expect that the service will be of similar endurance.

Dixon's Silica-Graphite Paint is distinctly the "*high efficiency*" paint.

"WONDERFUL OPPORTUNITIES"

Many trade papers are calling our attention to the "wonderful opportunities" that now exist for us "to sell to our neighbors to the South."

We are told that "this issue will be placed in the hands of merchants in Argentina, Bolivia, Brazil, Chile, Columbia, Ecuador, The Guianas, Paraguay, Peru, Uruguay, Venezuela, etc."

We are not told just how the said merchants will understand what these trade papers printed in English are telling

them, but by the time these papers, "thicker than autumnal leaves" are falling upon them, they will get some translator on the job or gather them up and save them for old paper as the Salvation Army is doing with the war news extras in the North,—and probably everywhere.

If the United States is to get a largely increased business from our neighbors to the South, it will only be gotten by the same good business methods employed by our foreign competitors. Of course our friends of the trade papers are out for business for "our neighbors" of the North and "the usual advertising rates will prevail" explains a great deal.

SHANE—GORRINGE

Miss Edith Shane of East Orange, N. J., and Mr. Harold Gorringe were united in marriage August 5, at the First Reformed Church in East Orange. Mr. Gorringe began his connection with the Dixon Company in 1908 and became a member of the St. Louis sales force in 1911. Mr. and Mrs. Gorringe enjoyed a honeymoon trip through the Great Lakes region, after which they further enjoyed a motor trip to St. Louis, accompanied by Mr. H. A. Van Derslice, manager of the St. Louis Office of the Dixon Company. Jersey City is Mr. Gorringe's home town and he carried with him to St. Louis the congratulations of a host of friends and acquaintances.

If you dislike any of our products tell us; if you like them tell others.



MISS L. M. STOCKING

One of the successful business women in the paint trade is Miss L. M. Stocking, who for the past eleven years has been connected with the Joseph Dixon Crucible Company of Jersey City, having entered their employ March 25, 1903. In 1909 she became head of the paint department, and the ever growing demand for Dixon's Silica-Graphite Paint is largely due to her successful management as well as to the merit of the material itself. Her photograph shows her to be an attractive young woman, and it proves that to be successful in the paint business a woman by no means needs to be unwomanly or lose any of those qualities which make her socially desirable. Her career proves that the paint business has brilliant opportunities for women who are able to take advantage of them and who have the ability to rise to the top of the ladder. Miss Stocking's example proves that an ambitious woman can succeed, provided she has ability and determination, even in a career which requires so much special technical knowledge as the paint business.—*The Painter's Magazine and Paint and Wall Paper Dealer.*

AN OLD STORY RE-TOLD

And a New One Added

Years ago a man threatened to bring suit against the Joseph Dixon Crucible Company for the loss of a cow. He said the cow drank rain water, shed from a roof painted with Dixon's Graphite Paint, and that he had been told that graphite was black lead and that the cow had died from lead poisoning, and if the Dixon Company did not pay him \$75.00 for the loss of that cow he would bring suit for its recovery.

The Dixon Company wrote him that if he could show that the company was at fault in any way that we would very gladly send him check for \$75.00 and would in fact make it an even hundred to compensate him for his anxiety and trouble. We added that if the cow was as good a milker as

he stated we considered she was worth \$100. We suggested, however, that before bringing suit and before he asked us for that check that he should consult the druggist in his village, as druggists were usually good chemists, and find out what that druggist said. He evidently did so, for we received a reply that he had learned that graphite was as pure and sweet and harmless as charcoal and that his cow had evidently died from eating wild carrots or some poisonous weed.

We are reminded of the above as we are just in receipt of a letter from a gentleman who has known the Dixon Company for many years, in which he writes:

"A man who has been with me for twenty-five years or more, doing my work about Englewood, is now at Short Hills, N. J., repairing a house which I own there.

"He tells me that the head of the Fire Department has notified him that if he uses graphite paint on the tin work, they will arrest him, as it is dangerous, causing fires."

And this in the State of New Jersey! It is indeed true that a man is not without honor save in his own country.

It is truly going from the sublime to the ridiculous when we recall that Dixon's Silica-Graphite Paint is used throughout the entire world for the protection of not only outside work, but for the protection of boiler fronts, smokestacks, etc., where it is always exposed to great heat. Insurance companies have written us that wooden structures painted with Dixon's Silica-Graphite Paint have resisted fire to the last moment and that there had been cases where such structures painted with Dixon's Silica-Graphite Paint have not caught fire even where the wood charred beneath the paint. That crucibles in which steel is melted in fiery furnaces, are made of graphite, seems to have been beyond the knowledge of the head of that fire department.

LUBRICATING FANATICISM

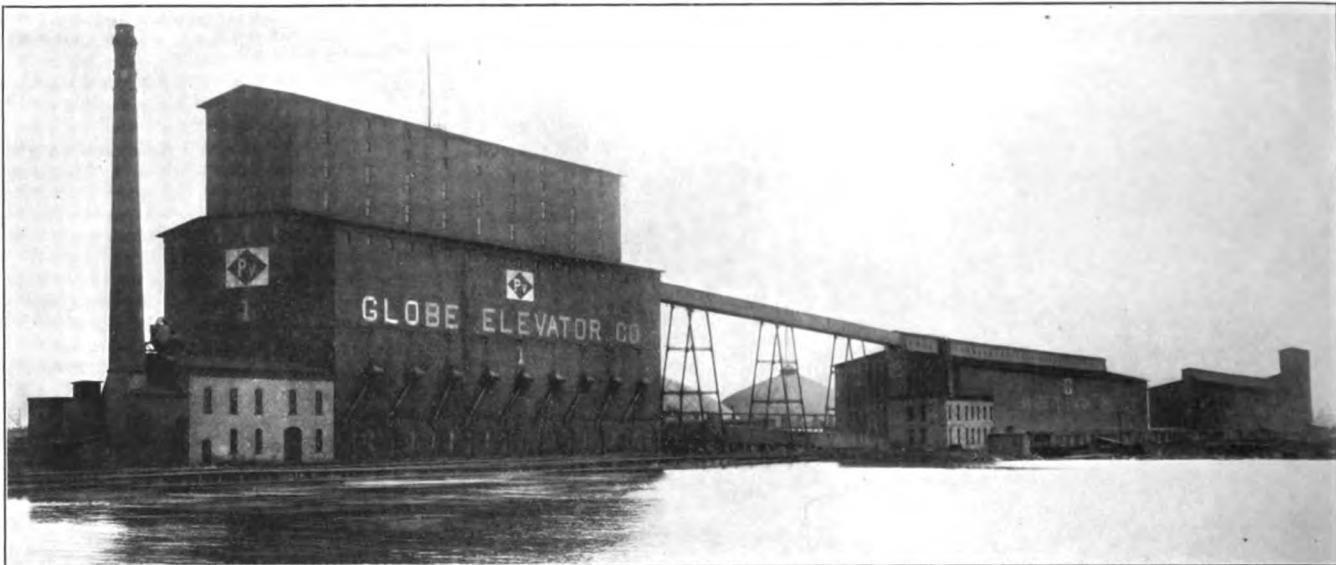
In India, it is said, some religious fanatics sleep upon beds of sharp pointed spikes with the body resting upon the pointed ends of the spikes. It is hard to understand this self-inflicted torture, and yet it is equally hard to understand why the owner or operator of a machine permits the bearings of that machine to become worn out through constant contact with the minute projections which exist in even the most highly finished metal surfaces and which in most cases cannot be lubricated with oil or plain grease. Fanatics about lubrication, however, usually discover the benefits to be derived from the use of Dixon's Flake Graphite before the "spikes" of friction have done any considerable harm.

"BOILERS NEVER CLEANER THAN AT PRESENT"

PLEASANTVILLE, N. J., Feb. 6, 1914.

We have been using Dixon's Flake Boiler Graphite for preventing boiler scale for nearly a year, and have obtained the best of results. Only recently our boilers were inspected, and reports of conditions of same are most gratifying. Our boilers have been in constant service for the past twelve years and were never cleaner than at the present time. We are only using $\frac{1}{4}$ pounds per boiler, 300 H. P. each, per day at the present time.

Yours very truly,
ATLANTIC & SUBURBAN RAILWAY COMPANY,
(Signed) K. A. CALE, Supt.



AN OLYMPIC PERFORMANCE

The elevators illustrated above, located at Superior, Wis., owned by the well known Globe Elevator Company, of which Mr. A. L. Searle is the able vice president, are huge structures, capacity with annexes, of 3,000,000 bushels each.

The protection of elevators from corrosion, weather, etc., is a problem that requires positive quality. A record of thirteen years without the necessity of repainting is a tribute to Dixon's Silica-Graphite Paint that we are somewhat proud of. We take pleasure in quoting the following letter.

MINNEAPOLIS, MINN., July 30, 1914.

Joseph Dixon Crucible Company,

Jersey City, N. J.

GENTLEMEN:—The Globe Elevators are located at Superior, Wisconsin. The capacity of the working elevator is 1,000,000 bushels and of the storage annexes, 2,000,000 bushels, each. I do not recall the exact date when they were painted prior to 1913, but according to my best recollection it was prior to 1900. The length of time between the two dates of painting, that is more than thirteen years, speaks for itself as to what we think of Dixon's Paint.

Yours very truly,

GLOBE ELEVATOR COMPANY,

(Signed) A. L. SEARLE, Vice President.

Dixon's Silica-Graphite Paint has been known world-wide for fifty years as the longer service and almost everlasting paint for the protection of all metal work. Our aim is to coat all metal work except war material. As to the guns and the sabres, etc., we should be glad if the world saw the last of them, that they might rust out in innocuous desuetude.

GOLD

Mr. James Scott, in *The Metal Industry*, tells us that the first striking fact connected with gold is that thin sections of the substance, such as pure gold leaf, exhibit a beautiful green color when viewed by transmitted light.

Gold is generally found in the metallic, or native state. It exists in the river sands and soils of most countries, though in too sparsely distributed quantities to be worth attention from the miners' point of view. Sea water is believed to con-

tain a grain of gold in every ton. The total amount in the ocean, therefore, must be enormous.

California and Australia must be regarded as the principal gold yielding centers. The process of recovering the gold found depends upon the condition in which it is found, whether it is found in rocks which contain the gold or whether it is found in connection with pyrites or some other mineral.

Concerning the wonderful malleability of gold, it is surprising that a single grain of gold can be hammered out to a leaf surface of about fifty square inches, or drawn to a thin wire several hundred feet long.

Gold is beaten to leaf between sheets of vellum or thick skin. The metal may be hammered to a thinness not exceeding .00005 of an inch. The melting point of gold is about 1064° C., equal to about 1947° F., while the metal will volatilize at the temperature of the electric arc.

Readers hardly need reminding that gold never tarnishes in either air or water. The symbol for gold is Au, the Au having been derived from the Latin Aurum. Gold cannot be dissolved or affected in any way by either common acids or alkalies. To reduce it the two acids, nitric and hydrochloric, must be employed. This medium is known as *aqua regia* (*i. e.*, royal water), and is made by mixing together one part of nitric acid with two to four parts of hydrochloric acid. Neither acid, singly used, has the slightest effect on gold.

IT PAYS—IT PAYS

Fair Nellie wed an engineer
Who went up in a blast,
When he returned to earth again
His worldly cares were past.
So Nellie advertised for work
And landed in a store,
And next week with the boss's son
She'll honeymoon some more.

—E. P. & Journalist.

"THE LIVE wire salesman is neat, filled with confidence, knows you need what he sells and has the ability to prove it."

—Business America.



**STEEL FRAME, IRON CARGO SHEDS, ROYAL MAIL
STEAM PACKET COMPANY, KINGSTON, JAMAICA**

Metal structures and protective paint thereon endure no test severer than they meet in the rainy, hot and humid tropics and semi-tropics.

The above illustration shows the cargo sheds of the Royal Mail Steam Packet Company at Kingston, Jamaica, on which Dixon's Silica-Graphite Paint was applied for protection against all kinds of possible corrosion, because it gives *longer service*.

These business-like and workmanship structures, each of fifteen hundred tons capacity, were designed by the well known architect, Lionel V. Grace, Esq. (Fellow of Royal Institute of British Architects), of 114 Queen Victoria Street, London, England. The steel work was fabricated by A. & J. Main, Limited, of London, and erected by Mr. S. J. Streadwick, contractor of Kingston, Jamaica. The photograph shows some fine specimens of the cocoanut palm.

"GREASED WITH PLUMBAGO"

Fort Pontain, like the other fortifications around Liege, are likened to great iron ant hills. The works are not extensive in size so as to lessen the size of the target against which the enemy's guns might be directed. The muzzles of the Belgian cannon and machine guns project above smooth metal approaches, known as glaces. These had been greased with plumbago so that they could not be easily traversed by infantrymen. The forts are built upon eminences which command the surrounding country.—*Boston American*.

If the "glaces" had been well sprinkled with Dixon's Ti-
canderoga Flake Graphite, oh, my countrymen, what falls
there would have been!

A JAPANESE CUSTOM

The Japanese are said to be noted for their good manners and their politeness on every occasion. One of their rules of conduct is known as "Bushido." It is a rule that we all might adopt and follow with benefit to ourselves and others. It forbids all talk about disease, trouble, distress, pain, grief, or other depressing conditions in the presence of friends and acquaintances. If one desires to consider such matters he should do it in private and not when he goes out among his friends and acquaintances. No matter if his heart is rent with grief, his mind distracted with trouble, his body suffering with physical weakness, he must hide all this from sight and present only a smiling face and cheering words in the presence of others. A Japanese who does this is actuated by the kind and chivalric feeling that he must protect his friends and acquaintances from anything that would cause them sorrow or pain or unpleasantness. He, therefore, conceals from his friends all the unpleasant things of his own life.

What a beautiful practice! What a blessing if such a practice should become a fad among complaining women and grumbling men.

TO HAVE a memory for benefits, not for offenses,—these are the two pivots on which friendships may rest strong and abiding, friendships which add to the greatness of noble minds.

—PETRARCH.

FISHERMEN NEED DIXON'S GRAPHITE

~~It prevents sticking of ferrules, tangling of line
and is good for reels. Fishermen need it. Get
free sample and booklet P-52.~~

JOSEPH DIXON CRUCIBLE CO., JERSEY CITY, N. J.

FORGETTING

Much is said and written nowadays about cultivating the memory. We are taught how to train the memory so that we may be able to retain impressions, remember the names of people, the date of different events, recall past experiences, etc.

All this is very good, but if we were to cultivate the art of forgetting somewhat, we and the world generally might be much better off. In forgetting the things that we should forget, we might be able to remember the things that we should remember.

The things that are unpleasant, the things that irritate, the things that make us feel bitter and unkind, these are the things we should forget; the things we should discard and banish to absolute forgetfulness.

The health of the body, as well as of the mind, depends upon forgetting. To let the memory of a wrong, of angry words, of petty meanness, linger and rankle in your memory will not only dissipate your mental energy but it will react upon the body. The secretions will be diminished, digestion impaired, sleep disturbed, and the general health suffer in consequence. Forgetting is a splendid mental calisthenic, and a good medicine for the body.

If any one has been mean to you, has wronged you, heaped slander upon you, treated you contemptuously or discourteously, forget it. Remembering it will not undo it, but will only make you irritable, bitter and angry; will react upon you harmfully, both physically and mentally.

If your friends prove false and cast you off, do not hold it in anger against them, but rather pity them. Keep a clear conscience and forget the little jealousies, the petty meannesses that may be bestowed upon you.

Forget the peculiarities of your friends, forget their faults. Remember only their good qualities. Forget your disappointments, forget your annoyances, forget all the disagreeable things.

By forgetting you will develop for yourself a sunny disposition, a good-natured temper, a cheerful manner, a healthful body. Forgetting keeps at bay wrinkles and old age. It beautifies the countenance with a beauty all its own—peace, contentment, health. It strengthens the memory, keeps young and virile the faculties of the mind, elastic and agile the muscles of the body.

How shall you forget? By turning your mind to happier things. When the remembrance of unpleasant things crowd into your mind, use your will power and deny them a foothold there. Turn your thoughts immediately to the happy moments that have been yours. Deny the disagreeable things any place in your thoughts. Pick up a book and read, or go some place. Get out in the fresh air and walk or ride. Fill the mind so full of other matters that there will be no room for the disagreeable memories.

Go to sleep with the thought of pleasant things in your mind, and begin the next day as though it was the first day of all your life, the last day, the only day.

Little beams of moonshine,
Little hugs and kisses,
Make a little maiden
Change her name to Mrs.—*Yale Record.*

GRAPHITE

FORESAW END OF EUROPE'S PEACE

No one can successfully maintain that the titanic struggle now in progress in Europe would have been avoided had Edward VII. lived. Yet the fact that this tremendous clash of armies and ships actually began scarcely four years after the king's death in May, 1910, renders a poem called "The Eagles," written by George H. Blair at that time and published in the *Boston Globe* on the morning after the funeral, almost gruesome in its prophecy. The poem follows:

THE EAGLES

Harken, ye gathered rulers
Who ride through London's gloom,
And follow the draped gun carriage
To Edward of England's tomb.

Men called him Peace of Europe.
Shall the calm he strove for cease?
Will ye loose now Europe's Eagles
To prey on the Dove of Peace?

There is a Northern Eagle,
Two-faced, savage and thonged;
Shall he wing his way to the southward
And prey as he always longed?

There is a stern Black Eagle,
Powerful, steadfast, grim;
Shall he follow his trade-mark rangings?
Shall ye lower your points to him?

There is a Golden Eagle,
Swift winged for strife or play;
Are the wreath and the "N" still missing
That startled the world that day?

There's another Two-headed Eagle,
Claimed from the Cæsars of Rome;
Shall each head rend the other,
In their fierce-hearted, jealous home?

Ponder, ye congressed rulers;
Think well! Dare ye say
That ye follow the Peace of Europe
To Edward's tomb this day?

GREASING THE SPRINGS

A compound, formed of flake graphite, heavy grease, and oil thoroughly mixed together so that it can be easily spread without running, is of great value to autoists. Strips of coarse canvas, cut the width of the spring leaf and any convenient length, may be soaked and well covered with the mixture. The spring leaves can then be separated with a spring separator and the strips placed between. On allowing the weight of the car to rest again on the springs, the oil is partly squeezed out and the graphite mixture is pressed into the canvas, where it stays for a long time, affording ample lubrication to the springs.

—E. BLUE in the *Technical World Magazine.*

IT IS better to be an optimist with one leg than a centipede with a grouch.—*Service.*



**Now here's advice
right off the reel:
In crucibles for gold
or steel, get Dixon's
and one square deal**

Joseph Dixon Crucible Company
ESTABLISHED IN 1827 Jersey City, N.J.

DRAWING AND TEXT BY HENRY TURNER BAILEY

KRUCIBLES A LA KUBIST

Mr. Henry Turner Bailey has, as intimated in the April issue of GRAPHITE, an inimitable method of producing things which may in a great measure account for his position among the leading exponents of School Arts Education.

When it comes to caricaturing the cubists, Mr. Bailey seems in his element, as those who read their April GRAPHITE will readily agree.

Another of Mr. Bailey's unique productions is reproduced above, and although in somewhat "straightened" circumstances, the figure is nevertheless a distinct portrayal of "the man behind the tongs" and of the vessel that takes to fire and flames as a duck to water.

"WATCHFUL WAITING" will never get you anywhere commercially. You have got to advertise and pedestrianize. A call of distress is all right—if it is heard some one may come and rescue you, but a business call must be followed up if best results are looked for.

Advertise and advertise all the time. Put vigor and punch in your advertisements and printed matter, and put the same in your salesmen. There are neat and nice looking advertisements that are failures and the same may be said of some salesmen. A salesman is only another form of an advertisement and sometimes he does not hold as much information.

"IF IT WERE possible to enact laws better than the people the laws would not be enforced until the people themselves became better."

GRAPHITE

MR. BOWLES BECOMES A BENEDICT

The announcement of Mr. and Mrs. Leon Carrau of the marriage of their daughter to Mr. Arthur Cleveland Bowles, manager of the San Francisco Branch Office of the Joseph Dixon Crucible Company, caused a pleasant surprise to many of Mr. Bowles' friends throughout the Dixon Company. The wedding occurred at San Francisco on August 26. To both the bride and groom are extended the heartiest congratulations and best wishes from the employés of both the home and branch offices of the Dixon Company.

THE SOREHEAD

By WALT MASON

When Grouch comes home, at close of day,
From sawing wood or shucking hay,
He's in a frame of mind;
He roasts the work he has to do,
He roasts the housewife, good and true,
And says things most unkind.

He roasts the grub he has to eat,
He roasts the milk for being sweet,
The slaw for being sour;
And when the meal is done he sits
In gloomy state, and throws some fits,
And growls hour after hour.

The children worry poor old dad,
He knows where there's a club;
The wife goes round with weary tread
And wishes she had never wed that sort of dismal dub.

A wiser man is Billiam Bunn,
Who, when the long day's work is done,
Goes home in cheery mood;
He chortles and he cries:
"Gee whiz! How good this nifty supper is,"
As he throws in the food.

The children greet him with a yell;
They love their daddy passing well.
And he loves them some more;
His wife's been waiting for a while
To give him welcome, and her smile
Is wider than the door.

The humble home where gladness dwells,
Where kind eyes smile and laughter swells,
Is Heaven, simmered down;
But home is like the other place
If on disgruntled father's face
There hangs a chronic frown.—*Havana Post*.

THE LEISURE CLASSES

In the country a man inclined to leisure is supposed to whittle a pine stick. In town he kills time by putting needle points on a lot of lead pencils.—*Washington Star*.

Seems to us there was some one in the Dixon Company famous for needle pointed pencils.

DIXON'S graphite publications sent free upon request.

THE DERBY HAT

The old saying, "mad as a hatter," may be well changed to a hat-mad editor and applied to the editor of the *New York Times*, who takes great offense in an editorial against the comfy soft hat. The editor says: "Time was when the ordinary man possessed two hats, not counting the silk topper laid away for ceremonial occasions and the cap worn for outing. With a straw in Summer and a derby the rest of the year he was always in style, but there is a widespread movement now to discard the stiff felt altogether and substitute for it one of the objectionable soft hats of all shapes or none which the inconsiderable manufacturers and traders have forced upon the market. These soft felt hats, unlike those of a generation ago, have no character whatever. A green soft hat with a drab band and a bow at the back will make a sage look like a clown, while one will impart to the naturally frivolous person an air of hopeless misery out of all keeping with his character.

"The derby on the other hand, seems to be the true head-gear of democracy. Almost any man derives an air of respectability from a decently brushed derby. Statesmen and clergymen are victims of the soft-hat mania. The green felt, the plush hat, the soft hat with a fuzzy surface protect the skulls of eminent men. They are not only unsightly and forbidding; when you consider the transformation they have effected in masculine humanity, they seem positively indecent."

BUSINESS IN SOUTH AMERICA

Every manufacturer in the United States has been more or less importuned by circulars or by persons to take advantage of "the present great trade opportunities in South America."

Printers' Ink for September 3 has a most timely article entitled, "A Sales Manager's Trip in South America" by Frank Lamkin, a man who has traveled through the leading countries of South America in his capacity of export manager for ten American concerns. What Mr. Lamkin writes checks up with what the Dixon representative at Buenos Aires has advised us.

OFFICIALS of the Weather Bureau and students of sun spots at the United States Naval Observatory attributed the unseasonable cold weather in September to the very large spots that were present on the sun. These spots appear, the records indicate, in regular cycles, and corresponding meteorological reports indicate that when the spots are present in great size the weather becomes cooler and that when there are no spots on the sun the weather becomes very warm. There are variations from this rule due to local terrestrial conditions.

The spots were said to be some 25,000 miles across and plainly visible to the unaided eye, protected by shaded or smoked glass.

THAT THE advocates of heavy armament are losing ground seems to be the opinion of many, and that the highly sensible opinion, long ago laid down by the late Professor Sumner, that, as we get just what we prepare for, disarmament of the nation, like that of the individual, is a condition conducive to peace.

DOES A METER READER WORK?

Few people realize how many motions meter readers have to go through in collecting the information necessary for making up electric bills. Some interesting facts are brought out in the analysis of a meter readers' movements in a town of 17,000 people, as presented in the *Electrical World*. The data shows that twenty-eight hours was required in reading 730 meters. During that time 681 stairs were climbed and 1867 doors had to be opened. In traveling from one consumer's house to the next the meter reader traversed 304 blocks and crossed streets 314 times. These figures suggest that considerable time could be saved the men, while inconvenience could be spared the customers, if meters were installed in more accessible places, such as, for instance, on back porches.—*Electrical World*.

SCHOOL SUPERINTENDENT LIKES DIXON'S ANGLO-SAXON

Last year the School Department of our Boston Office cast some bread upon the water in the shape of some sample pencils. In following up the campaign this year the letter reproduced below was received and afforded our Boston Office the satisfaction of knowing that their work of last year was not only remembered but appreciated by those who did not immediately respond.

CASTINE, June 1, 1914.

Joseph Dixon Crucible Company.

Last summer you gave me a few pencils as samples and I have just received another package.

I think Dixon's Anglo-Saxon No. 3 is the best lead pencil made. I will try to remember to give you an order this summer through our state superintendent of schools.

Yours truly,

(Signed) ELBERT F. RICHARDSON, *Prin.*

State of Maine—Eastern State Normal School.

"TO ME the tragedy is that whoever wins, my brother is defeated!"

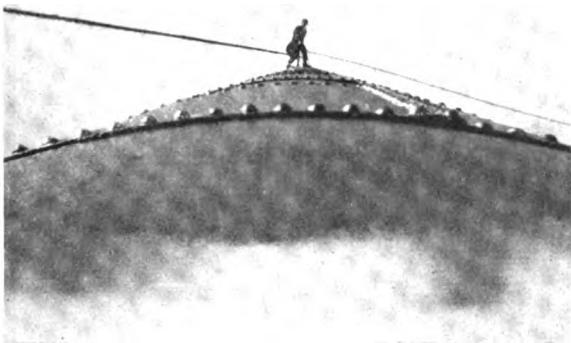
This is from the pen of a socialist writer and the *Havana Post* says it is too bad that the world did not thrill with that sentiment before the war started. All attempts to place the blame for the war is unwise and mostly unfair, but this one underlying cause may be asserted—the lack of the sense of brotherhood.

A NEW puzzle to the United States customs men is, "What are stuffed sharks; are they fish, leather or curios?"

It has sometimes been a puzzle to the Dixon Company to know if some of the "lubricating" material offered the confiding public is graphite, pond mud, coal dust or just plain dirt.

HUNTSMEN NEED DIXON'S GRAPHITE

Keep barrels and lock mechanism in perfect condition by using Dixon's Graphite. Booklet 52-P and sample sent free.
JOSEPH DIXON CRUCIBLE CO., JERSEY CITY, N. J.



WATER TOWER, EAST HAMPTON WATER COMPANY

Dixon's Silica-Graphite Paint on Top

These two striking illustrations show the daring "steeple jack" (his name is not Jack, but Bill) William A. Lewis, on top of the water tower at East Hampton, N. Y., and also in the act of ascending the tower.

One photograph also shows the immediate improvements when the lower part of the tower was painted with Dixon's Silica-Graphite Paint.

This work shows the good result of advertising. The Dixon Company mailed its house organ, GRAPHITE, to Mr. William F. Ehle, engineer of the East Hampton Home Water Company, who is scientific and practical enough to know a good thing when he sees it. He read about Dixon's Silica-Graphite Paint as the best, most economical, "*longer service*" protective for metal work, and the result was that he ordered the work done with Dixon's Paint. "Go thou and do likewise" is an adage *apropos*.

We are indebted for the above photographs and information to Mr. Edwin H. Crampton of Brooklyn, who is the oldest living stockholder in the Joseph Dixon Crucible Company.

Mr. Crampton is also one of the largest holders of Dixon stock, and for more than fifty years has taken a very active interest in all of the products of the Dixon Company.



by the purchaser, the pay to be determined by that estimate and service in excess of the estimate to be performed but not paid for.

3. Congress should not confuse the consideration of mail pay, a purely economic and business proposition, with political and irrelevant questions such as are involved in the Moon Bill and which would draw in a large number of persons interested in its passage wholly apart from the question of pay.

4. Congress should not act on mail pay until it has the report of the Joint Committee of Congress which has been investigating this subject for two years, or at all while engrossed in an unusually large legislative program.

Public sentiment has decreed that the price to be charged by the railways for the service they have for sale—transportation—shall be regulated by commissions. The government, when there is disagreement steps in between the shipper and the carrier and adjudicates the reasonableness of the rate. The government theoretically intervenes as a disinterested arbiter between those who are seeking the best possible bargains. In the transportation of mail, a department of the federal government assumes the position of shipper and yet seeks to fix without appeal its own valuation upon the services rendered to it by the railroads. The attitude of the Post Office Department officials is that the railroads should transport the mails in such quantities and by such methods as the department may require, paying for such service whatever sum they please.

As business men we declare our conviction that no public official having a special interest in the financial showing to be made by his department, should be the arbiter of differences between himself and those who must serve him. Upon careful consideration of the legislation pending at Washington affecting mail pay, we have felt is our duty to express to our fellow business men of the country the conviction that the provisions of the proposed law are contrary to well accepted usage in the business world. We hope that business men will make known to Senators and Representatives in Congress their views based upon their experience and knowledge of business principles.

GEO. A. POST,
President, Railway Business Association.

BUSINESS PRINCIPLES AND RAILWAY MAIL PAY

Shall Congress Force Upon the Roads, Which Cannot Decline, Contracts That No Business House Would Accept?

Proposals for readjustment of railway mail-pay now pending before Congress involve such serious divergence of view as to facts and as to principles of fairness that the attention of business men is invited to the situation. As business men we submit:

1. The government dealing with a company which cannot refuse to deal should not permit the price to be fixed by an official who has a balance-sheet stake in making the price low.

2. The government should not force upon a railroad a contract which no business house would accept, under which the quantity of service to be rendered is estimated in advance

How Jerry Painted the Plant

(One Real Paint Film)



1

Jerry decides that repainting about the power plant occurs too often. Determines to investigate while on his vacation journey



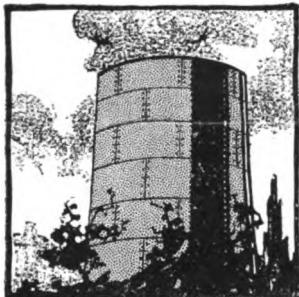
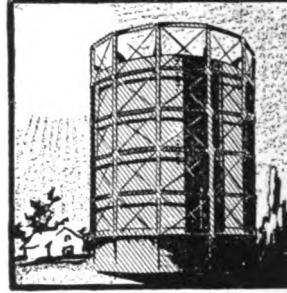
5

Is told that railroad property, including bridges, viaducts, steel cars, fences, etc., are protected for longer periods with Dixon's Silica Graphite Paint



7

than with any other protective material and that water, gas and electric companies also use it. Makes inquiry about graphite paints. Discovers



10 the peculiar value of flake graphite as a paint pigment; importance of silica; why either alone is unsuitable as a pigment. Learns how the hand of



12

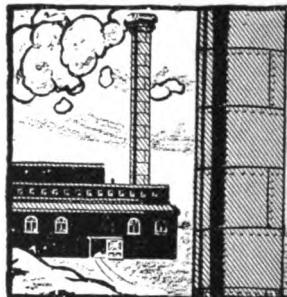
Nature has joined these two minerals, inseparably and totally unlike mechanical mixtures. Finds out why a graphite pigment should be made in

13 four colors only and but one grade. Discovers that this particular paint has been made for half a century. Jerry returns to power



15

plant enthusiastic. He paints the smoke stacks, boiler fronts, exposed portion of the shells, smoke flues and all other exposed metal work with Dixon's



18 Silica-Graphite Paint. Time verifies his judgment and his selection is widely adopted in other plants. If you have not already followed

19 Jerry's example, write for Booklet No. 190-B. It contains interesting and valuable information to power plant chiefs and is well worth reading.



Made in Jersey City, N. J., by the
Joseph Dixon Crucible Company
Makers of Pencils, Crucibles, Lubricants, Paint and other Graphite Products



LIBRARY
OF THE
UNIVERSITY OF ILLINOIS
9 NOV 1914

Graphite

Issued in the interest of Dixon's Graphite Productions, and for the purpose of establishing a better understanding in regard to the different forms of Graphite and their respective uses.

Vol. XVI

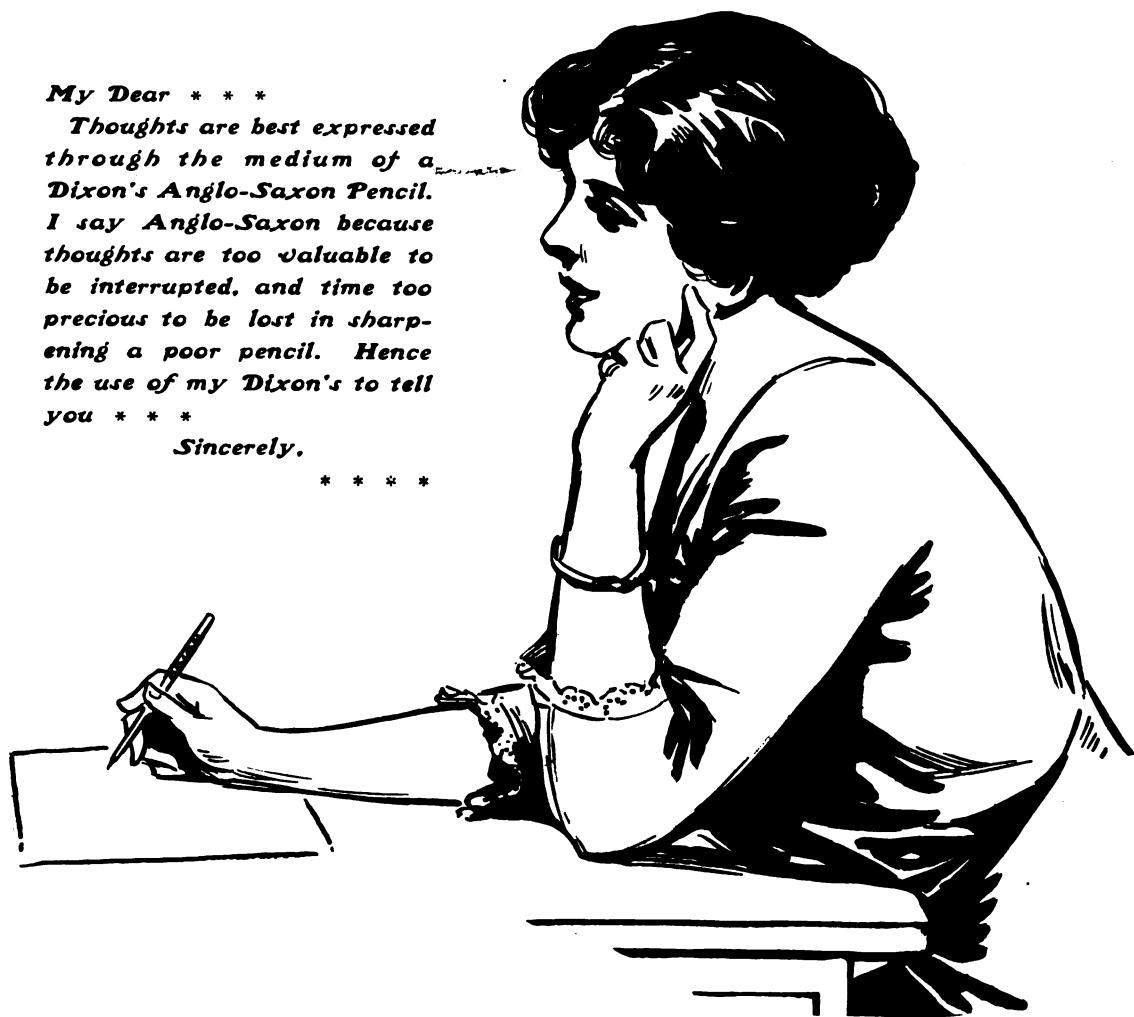
November, 1914

No. 11

*My Dear * * **
Thoughts are best expressed
through the medium of a
Dixon's Anglo-Saxon Pencil.
I say Anglo-Saxon because
thoughts are too valuable to
be interrupted, and time too
precious to be lost in sharp-
ening a poor pencil. Hence
the use of my Dixon's to tell
*you * * **

Sincerely,

* * * *



ESTABLISHED 1827



INCORPORATED 1868



JOSEPH DIXON CRUCIBLE CO.

JERSEY CITY, N. J., U. S. A.

**Miners, Importers and Manufacturers of Graphite,
Plumbago, Black Lead.**

OFFICERS:

President—GEORGE T. SMITH*Vice President*—GEORGE E. LONG*Secretary*—HARRY DAILEY*Treasurer*—J. H. SCHERMERHORN*Ass't Sec'y & Ass't Treas.*—ALBERT NORRIS

DIRECTORS:

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GEORGE E. LONG

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HARRY DAILEY

J. H. SCHERMERHORN

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NEW YORK SALESROOM, 68 Reade Street.

PHILADELPHIA SALESROOM, 1020 Arch Street.

SAN FRANCISCO SALESROOM, 155 Second Street.

CHICAGO BRANCH, 1323 to 1327 Monadnock Block.

BOSTON OFFICE, 347 John Hancock Building.

PITTSBURGH OFFICE, Wabash Terminal Building.

ST. LOUIS OFFICE, 501 Victoria Building.

BALTIMORE OFFICE, 616 Professional Building.

BUFFALO OFFICE, 72 Erie County Savings Bank Building.

ATLANTA OFFICE, Fourth National Bank Building.

EUROPEAN AGENTS,

Graphite Products, Ltd., 218-220 Queen's Road, Battersea, London.

SOUTH AMERICAN AGENT,

Alfredo J. Eichler, 666 Calle Cangallo, Buenos Aires, Argentine.

CUBAN AGENTS,

For all Products Except Dixon's American Graphite Pencils
Croft & Prentiss, Room 424 Lonja del Comercio, Havana.

HOW WE LOST AN ORDER

The Dixon Company lost a nice order for paint for county bridges, and the following letter will tell how it happened.

"The paint for the county bridges has been purchased and the contract has been awarded. I was obliged to leave town for a while to take treatment for rheumatism and the County Committee took advantage of my absence to purchase paint elsewhere. I arrived home last night and have not had time

to learn much about it, further than that they paid some junk-house \$1.50 a gallon for a very poor paint.

"The painters told me they can wash it off their hands with cold water without soap. I shall make a stiff protest when the bill is presented. Of course, this will not help the matter as far as Dixon is concerned, as it is too late for me to do what I had planned for you.

"I would like to send you a sample of the paint and have you tell me what it is, for I know the Dixon Company and Dixon's Silica-Graphite Paint are first class, and I feel that you would be doing justice to the Dixon Company and Dixon's Paint to expose a deal of this kind."

ARE YOU A RED PENCIL MAN?

We read that the various men in the organization of the C. T. Silver Motor Company speak with crayon pencils. While this seems curious, yet it has its advantages. Each member of the sales staff is supplied with a certain colored pencil, which as the month progresses represents his particular standing on the scales score board.

He is forced to use that particular color till he advances to the next.

Red, green and yellow are the three grades. Yellow is the beginning or bottom and is representative of the low division of the sales arrangement. Green is the middle course and red is representative of the best results in actual sales. This color scheme has a twofold effect on the men. It keeps them in a mental state of activity as to their duties and it might be said it is a physical evidence of their particular standing in the organization.

It is also a new field for Dixon's Colored Crayons which are noted for tough, smooth leads and vivid colors.

THE COST OF DRESS

Probably it was some old bachelor who said that the reason they speak of a ship as "she" is because the rigging costs more than the hull.

That the rigging of a boat, especially a yacht, is certainly costly, is evidenced by what we read in the papers concerning the cost of fitting out the latest craze in the way of an American racing yacht. We are told that a conservative estimate of the cost of sails may be placed at \$50,000. A suit of sails costs about \$14,000. They are made of Egyptian cotton and require much cutting and recutting to be fitted. Practically every sail is carried in duplicate and by the end of a season each yacht would have three or four suits.

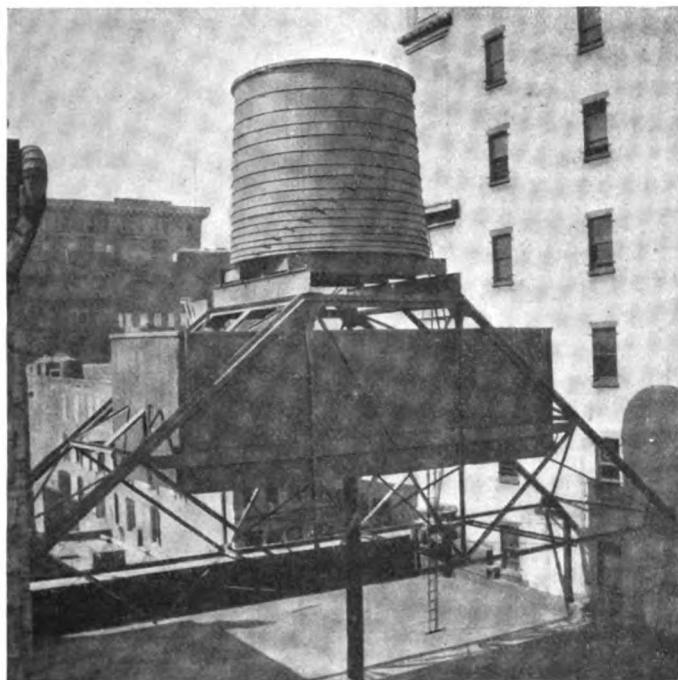
It is estimated that the daily cost while the vessel is in commission is \$2,500.

Each one of the racing yachts, the *Resolute* and *Vanitie*, has at least two masts, each costing, approximately, \$3,000.

Although the yacht race has been postponed on account of the war, yet the expenditure so far represents an investment of nearly \$1,500,000—money as good as thrown away so long as war or some other cause makes cup racing impossible.

I HAVE, for the last three years, thoroughly enjoyed reading GRAPHITE. I have used Dixon's Graphite Grease with complete success and would not do without it.

JAMES W. SWOGER, Pittsburgh, Pa.



TWELVE YEARS' PAINT SERVICE

The Dixon Company could present no stronger recommendation nor one from a more reputable concern than the following letter from Arnold, Constable & Company, Inc., New York City, signed by Geo. H. Wilson, Consulting Engineer.

"The enclosed picture is a general view of the steel structure designed for supporting one 26,000 gallon gravity tank and two 9,000 gallon pressure tanks for the fire sprinkler equipment in store of Arnold, Constable & Company, Broadway, Fifth Avenue, 18th and 19th Streets, New York City. The length of the span is sixty-nine feet nine inches and was erected in the year 1902. Dixon's Silica-Graphite Paint was used for protecting the iron. At this writing the structure does not show any signs of deterioration."

FIFTY YEARS WITH DIXON COMPANY, GETS \$100 PURSE

**Christian Voegler Rounds Out a Half Century of Service With
the Joseph Dixon Crucible Company**

Christian Voegler has rounded out fifty years of faithful service with the Joseph Dixon Crucible Company. In recognition of the occasion Mr. Voegler, who is a foreman in the stove polish department, was presented with \$100 in gold and an engrossed letter from the president, Mr. George T. Smith.

Mr. Voegler was at his work when John F. Links and Matthew D. Earl, two other veteran employés, halted him and told him he was wanted at the president's office. They acted as escorts. When Mr. Voegler arrived he found a gathering of "old timers."

Grouped about him were Mr. Links and Mr. Earl, who have been with the concern fifty-two and forty-two years respectively; John A. Tracy, forty years; George E. Long, thirty-seven years; Theodore B. Valleau, thirty-six years, and Richard Van Dien, thirty-four years.

The engrossed letter from President Smith follows:

"I consider it a great honor, as president, to be instructed by our board of directors to express to you, my associate in

the service of the Joseph Dixon Crucible Company, the pleasure and pride which the directors and officers have today in celebrating with you the completion of your fifty-year term as a faithful and, therefore, honored fellow employé.

"Few of us, working men at one branch or another, realize until it is too late the force and effect on another man of the example set in our daily employment, but you are fortunately one of those happy individuals in whose mind there need be no doubt in that direction, and there can result nothing but happiness for you and us in the contemplation of your continuous record of honesty, fidelity and integrity.

"Please receive my personal and official assurances that your associates rejoice with you today, and desire continued health, success and happiness for your richly deserved future.

"In conclusion, and as a mere incident of this occasion, I beg your acceptance of the accompanying token as a slight expression of the esteem we have and the honor we would do you today and hereafter."—From the *Jersey Journal*.

THIS IS PHWAT'S PHOT

In the September issue of GRAPHITE we published a definition of the word "phot," which is characterized as "somewhat misleading" by Mr. G. G. Townsend, a civil engineer of Frostburg, Md.

In order to "clear the atmosphere which surrounds so many electrical phenomena with an impenetrable mist of misconception," Mr. Townsend makes the following contribution to GRAPHITE:

A German named Yacob Von Trott
While sawing a board struck a knot;
His father-in-law
Examined the saw
And said, "Yacob Von Trott, phot's dot?"

This quiet young Yacob Von Trott
Picked up a small cast iron pot
And beat his Dad's head
"Till his Daddy was dead—
Said Yacob Von Trott, "dot's phot."

Thanks, Mr. Townsend.

FOREIGN CITIES IN AMERICA

People who think they cannot do otherwise than to visit Berlin, Paris and London each year and who, because of the war, are fearful of going abroad, may comfort themselves by knowing that Berlin may be found in as many as twenty-five American states; that London may be visited in ten American states and that the gay life of Paris may be enjoyed in no less a number than seventeen American states.

Hardware World ventures to say that a vacation spent in any of these cities would give one the opportunity for rest and relaxation from business cares, and perhaps far more economical and without the trouble of crossing the ocean.

E. F. O'BRIEN, of *The Times of Cuba*, says: "Our idea of wasted energy is when two girls kiss each other." It may be a great waste of sweetness but it is a greater waste of energy when they hug and hug each other.

CHEESE IT!**The Cop is Coming**

We often hear that remark by a small boy who is having a sly game of crap or who happens to be up to some other mischief.

The cry of "cheese" at the present time comes from the devotees of cheese through fear that the war in Europe will interfere with America having an adequate supply of that nourishing article in its various forms and aromas.

We are told by those who know a great deal about cheese that America is not dependent upon Europe for cheese of any kind. Within the last ten years practically every cheese made in Europe has been produced here, and in most cases the American is pronounced the better grade.

New York State and Wisconsin are the largest producers of cheese, and enormous quantities are shipped to Central and South American countries, and even to Europe.

Wisconsin manufactures an excellent cheese of the Camembert variety, and Limburger, a famous German delicacy, is not made in Germany but in Limburg, Belgium, and is better made in Wisconsin to the amounts of hundreds of tons than anywhere else.

There are about seventeen different makes of cheese that stand in comparison one to the other so far as their chemical constituents go. Their chemical parts are under five headings, water, fat, casein, sugar and ash. The ash represents the mineral properties such as phosphorous, etc.

There are over seventy varieties of cheese known in the market and the varieties of cheese are well nigh innumerable.

The United Kingdom, France, Switzerland, Italy, Germany, Holland, Sweden, Canada and the United States are the great cheese making countries.

The United Kingdom alone sends out several hundred million pounds annually, which will give us an idea of the amount of cheese that must be consumed annually.

THE ONE BOOK

If we were forced to make a choice of one particular book from which to draw all entertainment and amusement, what book would it be? Very few probably would choose a dictionary, but if before making a choice he could have the opportunity of making a careful study of Webster's New International Dictionary, without doubt he would select that particular book as his companion in solitude.

Space is not sufficient here to explain all the whys and wherefores, but if at this particular time when wars are raging abroad he should want to know how to pronounce the various French, German, Russian and other names that he finds in the daily papers, he would find the pronunciation given in his Webster's. If he did not care to take time to make a study of the elements of pronunciation of foreign names, he would find the pronunciation supplied for him. If, however, he desired to study somewhat the elements of pronunciation he would find among other interesting information that the letter "A" in most languages, other than English, never has a sound like that in the English words "fate" or "name."

Speaking of languages, how many can tell off-hand what languages are akin to the English and what are not? What has been the influence of other languages on the Anglo-Saxon; and what is the Anglo-Saxon language?

It would certainly puzzle many of those who think they understand the English language to see some of the old poems in English given in Webster's; so different are the words from those of the present day that the editors of Webster's have found it necessary to make translations.

Sometimes a woman is spoken of as Becky Sharp, but who was Becky Sharp? We speak of a man as black as coal, but what is white coal?

We know that foreign nations are now at war, but what was the thirty years' war and who were the Molly Maguires?

It does not matter whether questions relate to history, to war, to the building trades, to men in mechanics, or about printing, or legal terms or business terms or miscellaneous matters, they will be found answered in Webster's.

Everyone knows what c. o. d. means. A great many know what c. i. f. means, but how many know what c. i. f. c. and i. mean?

We read in our morning paper that England, or it may be some other country, has extended the moratorium for thirty days. What is the moratorium? Consult your Webster.

ELSEWHERE in this issue of GRAPHITE will be found two testimonials of Joseph Dixon's Crucibles. It is certainly a gratification to the management of the Dixon Company to come across, as it occasionally does among its old papers, testimonials of this kind.

It will be observed that sixty-eight years ago crucibles made by Joseph Dixon were recommended to all who used crucibles "as the best article of the kind to be obtained or ever known to the trade."

It is a further gratification to the management of the Dixon Company to know that the example set by Joseph Dixon is still in force and the Dixon Crucibles today are "the best article of the kind to be obtained or ever known to the trade."

We also call the attention of the readers of GRAPHITE to another feature of these two testimonials—the polite and courteous wording of these business letters. They read more like business letters that we receive from our foreign correspondents than like those that we receive from even our close personal friends in the United States.

VARIOUS, VERSATILE AND VIGOROUS!

Joseph Dixon Crucible Company, Jersey City, N. J., is hereby requested to send their monthly publication, GRAPHITE to each member of the Advisory Board of the *Fire Engineer* and charge the amount of the subscriptions (which is this request), to the *Fire Engineer*.

The *Fire Engineer* will do as much for any of its friends, on request, for GRAPHITE is so various and versatile and vigorous that any man should be glad to have it and take it home with him.—*Fire Engineer*.

To make Channels, Space-bands and
Matrices smooth and "slick," use

Dixon's Special Graphite No. 635

Booklet and Sample Free on Request.

Joseph Dixon Crucible Co., Jersey City, N. J.



DIXON'S LUMBER CRAYONS

Dixon's Lumber Pencils or Crayons, of which the above reproductions are only half of actual size, are made in a variety of colors to meet the demand of lumber companies, railway companies, the United States Forestry Department, manufacturers, mills, nurseries, shipping departments and others to whom Dixon's Crayons have become almost indispensable, because of their quality of materials and vividness and durability of colors.

Originally these crayons were made of graphite only and for lumber marking, hence their name. They were first made by Joseph Dixon, soon after he began business in 1827. They are now made in a dozen different colors and are used the world over for marking and for checking.

For quality of material, for durability and strength, for vivid and permanent colors, Dixon's are the recognized standard.

HOW PENCILS SOLD CASH REGISTERS

"Versatility in Salesmanship" with Mr. A. C. MacMahon of the National Cash Register Company is, according to *Judicious Advertising*, a fine art. His methods, judging from the following experience, rival those of Sherlock Holmes.

MacMahon had encountered a particularly hard prospect and after an not unsuccessful interview, as the story relates, waited several days before he paid this man a second visit.

"It won't do you a bit of good to talk cash registers," the man greeted him. "I never change my mind, once it's made up. I don't need them."

"I understand," said MacMahon. "You say your clerks are reliable, and never make mistakes. That's what I understood you to say, isn't it?"

"Yes, sir."

"In that connection, I have something to show you here," said MacMahon, taking a pencil from his pocket. "This."

The man looked at the pencil, puzzled.

"This pencil? What about it?"

"What would it indicate to you?" asked MacMahon, smiling, knowing the man would be merely puzzled. And he was—both puzzled and embarrassed at the salesman's air of confidence.

MacMahon indicated the eraser on the pencil. It was well worn.

"It is the pencil of someone who makes mistakes, judging from the eraser,—isn't it?" he inquired.

The man admitted that he was right.

MacMahon took several pencils from his pocket. He had, in all, about five. All were alike and all of the erasers were well worn.

"These aren't my pencils," he explained. "When you told me, the other day, that your clerks don't make mistakes, I happened to notice one of your bookkeepers erasing what he had written. During our talk here I managed to borrow these pencils from the clerks who came near us, waiting to

speak to you. These pencils belong to your clerks, and the erasers show that their owners make a good many mistakes, and that some of them, at least, are corrected."

Whether it was the ingenuity of the suggestion that pleased the merchant, or that he was really convinced that his clerks were not trustworthy, the fact remains that without more ado he signed up an order for equipping his place with the National Cash Register accounting system.

WHAT ART MEANS TO ME

Art may not mean the same to me that it does to you—the artist, the craftsman, the teacher. I am but a traveler on the highway, a buyer at the shop, a worker by the machine. My feet are soiled by the mire, my eyes are blinded by the dust, my ears deafened by the noise of the city street. My heart is troubled at the iron and concrete sky line of the big city which houses so much misery and human exploitation. My home even is a house of perfect inconvenience where simplicity and distinction count for nought.

But out of the shadow appears the city of tomorrow where art expression stops not with the statue, the picture, the tower on the forty-seventh story. For now I see useful things made in shops which are clean and safe, by people paid more than a living wage; factories situated by the hills and streams from whence they came; workmen boring into the bowels of the earth and raising their handiwork to the heavens under the guardianship of justice and humanity. I look upon cottages with individuality, inhabited by people of refinement; I catch the out-of-door odor of fruits and flowers; I hear the laughter of children no longer born of a sweatshop motherhood.

Everywhere people are working and creating out of their best, spending their earnings for beautiful things, spending their leisure as profitably as their dollars, gaining instruction and inspiration from schools, libraries, parks, to their children—to their neighbors, even so to themselves, giving love, sympathy and justice.

To me art means—service in better living.—ARTHUR D. DEAN.

THE GENTLEMAN

In *The Caballero* we find the definition of a gentleman to be the same as that which in the May issue of GRAPHITE we defined as a true Shriner and as "a man that's clean inside and out; who neither looks up to the rich nor down to the poor; who can lose without squealing and who can win without bragging; who is considerate of women, children and old people; who is too brave to lie, too generous to cheat, and who takes his share of the world and lets other people have theirs."

The Fra, in telling what he did when a traveling man years ago, ends up by saying: "And I sold the goods. I did not merely lay cornerstones and get things into shape, I did not secure a promise of an order the next time; I did not fix the man for a future trade, and then brag about it. Not I. I got the man's name an the bottom of the order sheet. That's what I did."

DIXON's graphite publications sent free upon request.

A PAIR OF CRUCIBLE TESTIMONIALS OF THREE SCORE AND EIGHT YEARS

NEW YORK, June 2, 1846.

Mr. Joseph Dixon.

SIR:—I have used the pots of your make marked "J. Dixon" and I do not hesitate to recommend them as superior to any other pots in the market or in the world, as I have tried all kinds made in this and the old country.

A man can gain a quarter of a day any time by using these pots and they work longer than any I ever used.

I thought there could be no better pot than those made in Philadelphia and marked J. Dyre Jr., but I must acknowledge the superiority of yours and in future shall use none others. I am yours with respect, WILLIAM WALLACE,

No. 5 Sullivan Street.

NEW YORK, June 1, 1846.

Mr. Joseph Dixon.

SIR:—I have used the pots ordered from you some time since and marked Joseph Dixon.

I have for forty years been in the habit of using all kinds of pots known to brass founders, whether of foreign or American manufacture, and do not hesitate to recommend yours to all who use crucibles, as the best article of the kind to be obtained or even known to the trade.

Yours last much longer and come up more quickly and safely than any I have ever used. Those I have used were No. 18, from several of which I have made more than nine hundred pounds of castings apiece. They require only fifteen minutes preparation before they are ready to charge. I have not lost one by flying or cracking.

It affords me pleasure to recommend merit and do justice to one to whom I in common with my fellow craftsmen, am so much indebted.

Wishing you the success you deserve, I am, Sir, though personally a stranger, yours with respect,

LOUIS DE COUDRES & SON.

MEDICINE AND THE AILING

There was a quack doctor who lived out in the hills
Who used two concoctions to cure human ills.
The one was a physic, the other a drink;
He made them of soda and colored them pink.
One tweedledee and one tweedledum;
The very same bottle was where they were from.
When people were ailing they took them to bed
And swallowed whichever the quack doctor said.
For people are easy and grafters are slick,
And there are more suckers than fish in the creek.
A quack politician came out in the hills;
He turned the same trick for political ills.
The one was protection, the other free trade;
He had but one bottle from which they were made.
They both skin you proper, and when it is done
You can't tell to save you by which you were skinned;
For people are easy and grafters are slick,
And there are more suckers than fish in the creek.

—Locust Grove Times (Okla).

THE MAN who never travels never passes a danger signal.

IGNORANCE OF OUR OWN GLOBE

We read in *Metallurgical and Chemical Engineering* that we have several astonishingly conflicting theories about the constitution of the center of the earth, but we have not yet developed the means to penetrate the world's crust beyond some deep mines—merely an imperceptible faint scratch on the surface—and in the meantime we keep on guessing, while today astronomers know already more about the surface of the planet Mars than we know about the interior of the globe on which we live.

It is nothing short of marvelous the progress that we have made during the last generation or two.

True science, contrary to other human avocations, recognizes nobody as an "authority," and is willing to change her beliefs as often as better studied facts warrant it; this difference has been the most vital cause of her never ceasing progress.

No end of work is in store for the research chemist, as well as for the chemical engineer, who can think by himself without always following the beaten track. The United States is only at the beginning of its successes.

THE OTHER day a purchasing agent was surprised to find that samples of Dixon's Eldorado Pencils were equal in every respect to the foreign made pencils that he had been buying. With his order for Dixon's Eldorado Pencils came a genuine expression of pleasure over the fact that he had been able to buy pencils, "Made in America," just as good—grade for grade—as the best foreign make.

THE WRITER has a working knowledge of Spanish and finds "Spanish Words and Phrases" a very practical guide to the every day phrases most commonly used and believes it will be of special benefit to those just beginning to study the language.

—GEORGE F. CALLEJA.

IF you don't kill friction,
friction will kill your car.
Get the jump on friction with
the perfect friction killer—use

DIXON'S
Graphite Grease 677
**For Transmissions
and Differentials**

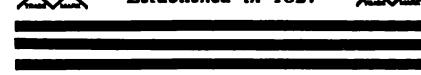
It forms a smooth, oily surface over bearings that eliminates metal-to-metal contact, results in longer mileage, cuts down repair bills and gives long life to your car.

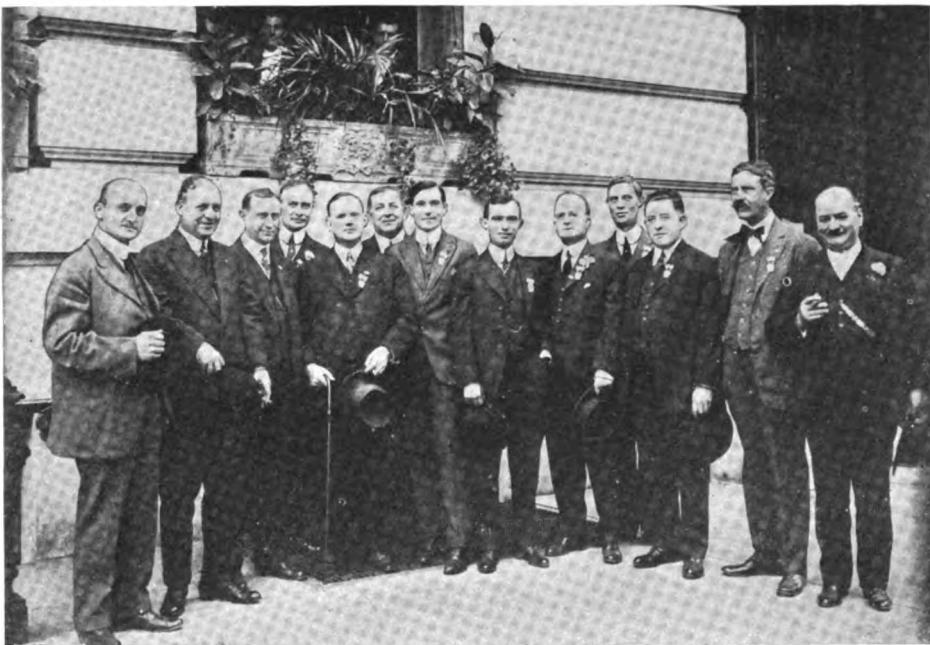
The Dixon Lubricating Chart
tells you when to lubricate.
We'll send it to you on request.

The Joseph Dixon Crucible Co.

JERSEY CITY, N. J.

Established in 1827





AT THE STATIONERS' CONVENTION

Here, in front of the Bellevue-Stratford Hotel, are thirteen of those who gathered in Philadelphia on October 12 to create and foster a permanent feeling of friendship and fraternity between the manufacturers and dealers in stationers' goods throughout the United States. The occasion was the Tenth Annual Convention of the National Association of Stationers and Manufacturers.

This group is characterized by one of its number as the "Lucky Thirteen," because all of them represent the Joseph Dixon Crucible Company. At the left is Mr. Andrew J. Pfaff, who with headquarters at the Philadelphia Branch of the Dixon Company, has done so much to Dixonize the Pennsylvania schools with pencils "Made in Jersey City." Next to Mr. Pfaff is Jack H. Lewis, the genial manager of the Dixon Company's Atlanta Branch. In his spare moments, Mr. Lewis endeavors to sell a bale or two of cotton, but even then he insists that the order be made out with a Dixon's Anglo-Saxon Pencil. Third from the left is Mr. William A. Houston, who, in Baltimore and vicinity, is familiarly known as Billy, and it may be added that this familiarity breeds orders for Dixon's American-Graphite Pencils. Next in line is Mr. William J. Coane, who, though vice-president of the Ajax Metal Company will always be known to Philadelphians as the moving spirit with those who formed the Philadelphia Stationers' Association. Mr. Coane was for years manager of the Philadelphia Branch of the Dixon Company and though called to a higher position, he is still in spirit a Dixonite and happy when the opportunity affords to be among the Dixon Boys. Next to Mr. Coane is Mr. J. H. Schermerhorn, treasurer of the Dixon Company and the only "Man from Home" to extend around the glad hand. Standing next to Mr. Schermerhorn is A. R. Lloyd, who succeeds in making his personality an important factor in his work of popularizing Dixon's Pencils throughout the state of Pennsylvania. Mr. Lloyd, like Mr. Pfaff, is connected with the Philadelphia Branch. Beside Mr. Lloyd stands Mr. W. G. Stringer, manager of the Philadelphia Branch and next to him is his able assistant, Mr. Herman Price. At the side of Mr. Price is H. A. Nealley,

manager of the Boston Branch of the Dixon Company. At this particular time and place it was considered fortunate that Mr. Nealley escaped from the wrath of several thousand hostile baseball fans. Looming up behind Mr. Nealley is the tall, lean form of Mr. H. A. Van Derslice, manager of the St. Louis Branch of the Dixon Company. Mr. Van Derslice does not permit any orders for pencils from his territory to travel in any other direction than Jersey City. Prominent in the Chicago Office force and next in line to Mr. Van Derslice is Mr. Charles P. Mueller. To Mr. Mueller's right is Mr. Dudley A. Johnson, who has for so many years been identified with the Dixon Company, that his many friends and acquaintances in the "Windy City" were scarcely surprised to learn of his comparatively recent appointment as manager of the Chicago Branch of the Dixon Company. Mr. Johnson's capabilities are written upon his face, and we doubt if even a Dixon eraser could eradicate the lines which indicate him as one who is fully able to handle the reins of his responsible position. Last, but not least, is Mr. John M. Ready, who pilots the destinies of the Metropolitan district of the Dixon Company and who is probably better known throughout the stationery trade from Maine to Mexico and from New York to San Francisco than any other living man in the stationery field.

This picture is evidence that the Joseph Dixon Crucible Company is fully alive to the value of having its representatives extend their acquaintanceship to those in the stationery field who have not yet experienced the satisfaction of selling Dixon's Pencils. If the purpose of these representatives is accomplished, our friends will increase and our acquaintances decrease in corresponding numbers.

"SAFETY FIRST" FOR PRINTERS

He poured some liquid on the form;
He wished to make it clean.
He dropped a match down in the stuff,
And since he's not benzine.

DIXON'S graphite publications sent free upon request.

TRIPLE VALVE LUBRICATION

Triple valve lubrication has been for many years a thorn in the flesh of the air brake man. Suitable lubricant and the proper method of application has in itself constituted quite an air brake problem for the manufacturers of brake apparatus, as well as the air brake man, but at the present time a great many tests of a practical nature have been conducted and much valuable information has been derived and placed on record, so that definite and positive instructions concerning triple valve lubrication can now be formulated.

Fine dry graphite for the slide valve seats of triple, distributing and control valves is now recommended; however this is in the nature of a compromise and we will attempt to explain why it is the best lubricant obtainable for the purpose and incidentally why it is in the nature of a compromise.*

We know first that if a heavy bodied oil or grease is used on the triple slide valve and seat, quick action during service operation is almost sure to occur, or when oil or grease is used the slide valve under pressure is about twice as hard to move as when the valve and seat are perfectly dry and under many different experiments it is conclusively proven that oil frequently renders the valve four or five times as hard to move as when dry.

This may appear ridiculous to any one who considers only the frictional resistance obtained between the surfaces of two metals in contact, but in this problem the air pressure per square inch on the slide valve must also be considered and when its full effects are recognized, it conflicts with the usually accepted laws governing frictional resistance.

Air brake men now understand that oil or grease forms an air tight packing about the slide valve, excluding any air pressure from between the valve and its seat, whereas a perfectly dry valve and seat permits a slight leakage to the under surface of the valve, thus tending to balance the air pressure surrounding the valve and rendering it easier to move than when it is lubricated or to say hermetically sealed about its edges.

The resistance to movement of the dry slide valve is practically constant, and while in motion the lubricated slide valve may have less resistance, but after being at rest under air pressure for one or two minutes, this oil or grease packing very materially increases the resistance to movement until the slide valve is dislodged and brought into motion.

A very crude and somewhat exaggerated experiment that might serve as an illustration would be to place a flat piece of iron or a nut on a greasy engine frame and after a trip or two it will be necessary to hammer it to loosen it from the position from which it has imbedded itself in the grease and oil. In a similar way, but in a lesser degree, the triple slide valve imbeds itself in the oil or grease placed on it and its seat.



*The compromise mentioned is one that with a little care would be unnecessary. A little of Dixon's Air Brake Graphite goes a long way, and we have often cautioned users against the theory that "if a little is good, a whole lot must be better."

In addition to Dixon's Air Brake Graphite, the Dixon Company produce a specially prepared grease for all parts of the air brake system for which the dry graphite is not recommended.

In the air brake works at Wilmerding, Pa., frictional resistance to the movement of a triple valve is found by the use of a mercury column, which gives absolutely accurate results, and in further efforts to determine the effects of oil or grease as a slide valve lubricant, a large number of triple valves, after being lubricated and in service for a period of three months, were removed and impressions of the slide valve face were taken and carefully examined with a microscope and in no case could any traces of lubricant be found after three months' service, hence the logical conclusion that if a triple slide valve runs perfectly dry nine months out of twelve, it can certainly run dry the other three months without showing a great deal of additional wear of the valve and seat. This is, of course, the answer to the question why undesired quick-action has so frequently manifested itself in epidemics immediately after a large number of triple valves have been cleaned and oiled.

From the information derived from many experiments, Mr. Turner took the stand that a dry slide valve and seat were the remedy for undesired quick-action and very conclusively proved it to the entire satisfaction of at least one railroad, and as it was accomplished by merely reducing the slide valve friction or lessening the load on or work of the triple piston, it also follows that the use of dry graphite still further lessens the friction of the slide valve or work imposed upon the piston.

Methods of using graphite and effects of brake cylinder lubricant working back into the triple valve either when dry or previously lubricated, at the present time constitutes a very live topic, the effects are quite well known, but the problem lies in keeping the valve and cylinder dry enough in service to obtain the desired results when using dry graphite.

In oiling or greasing the brake cylinder, it is difficult to convince the repairmen that too little lubricant is better than too much, just as it is difficult to get the repairmen to put up a feed valve without lubricating the supply valve piston or to clean a brake valve without lubricating the discharge valve piston, but after a little practical experience with the disorders that can be traced to excess lubricant he will gradually fall into line and use the specified amount and in the proper place.

During a session of the 1913 Air Brake Convention, Mr. Turner was called upon to disseminate his views upon the subject of lubrication of triple valves and its connection with undesired quick-action; he said in part:

"Dry graphite is the best lubricant we can put on the slide valve. The only objection to its use is that men will put on such quantities of it that it will clog the ports and passages, then the remedy is as bad as the disease."

"It is an absolute fact that an unlubricated or graphite-lubricated slide valve cannot in any way be responsible for undesired quick-action. I want to make that statement as emphatic as I can, when you get the quick-action it is not due to the fact that you have graphite on the slide valve, but to the fact that you have no longer got it, water has entered in or oil has entered in, or something has entered in and given that piston more work than it can perform. Someone here has said that brake pipe leakage causes the undesired quick-action, another says, water on the slide valve causes it, another says the engineer is responsible for certain cases, then let us separate the different cases and make an effort to prevent them, the disorder is either curable or incurable, it is either inherent in the triple valve, the brake pipe, the engineer or it

is somewhere, possibly in all of them; let us find the part at fault and apply the remedy.

"Most people's idea is that a triple valve is built so that its quick-action depends entirely upon the difference in the rate of reduction; if that were so, how would you ever get it on a 100-car train where it takes one minute and one-half to pull twenty pounds of air out of the brake pipe? Take a six-car train, where you can take out the twenty pounds in six or seven seconds, and then say that we have undesired quick-action more frequently on the 100-car train than on the six car train and that it is due to the rate of reduction, that the engineer has pulled out too much air, or something else; explain these things to me; I am just as skeptical about these things as some of you seem to be about other things, dry graphite, for instance. If quick-action is due to the rate of reduction, why does it take place when we are reducing twenty pounds in one and one-half minutes and not take place when we are reducing the twenty pounds in six seconds? That is the thing that is hard for me to understand. This general supposition concerning quick-action is only true when the triple valve is lubricated with dry graphite. Just get that right in your own minds. Undesired quick-action is due to the differential that is built up between the brake pipe and the auxiliary reservoir, resulting from the excessive friction on the slide valve or some other part, causing the slide valve to hang until sufficient reduction takes place to break it loose, then it travels all the way to quick-action.

"If you do not believe that, just take a chronic kicker, remove the graduating spring and put in a stronger one, any one that will offer a resistance of five pounds to the piston, if you can then get quick-action with a service reduction, you will have performed a miracle, an absolute miracle, for it cannot be done!"—*Railway and Locomotive Engineering*.

AN APPRECIATION OF THE PENCIL PROCESS CARD

The Dixon Company has for some time past furnished the school teachers with process cards showing the various stages of Dixon's Pencils in the making. Invariably, the teachers who receive this exhibit return grateful acknowledgments, and the following example is one of many addressed to our Boston office.

"I am the recipient of your educational exhibit for the benefit of my building, and I want to express my appreciation for the favor shown us.

It has already been used in my grade and no other exhibit has aroused such an interest with the children. They are pleased to learn so much about the little tool they use every day, most of them coming from your factory.

Thanking you for the kind courtesy shown, I remain,

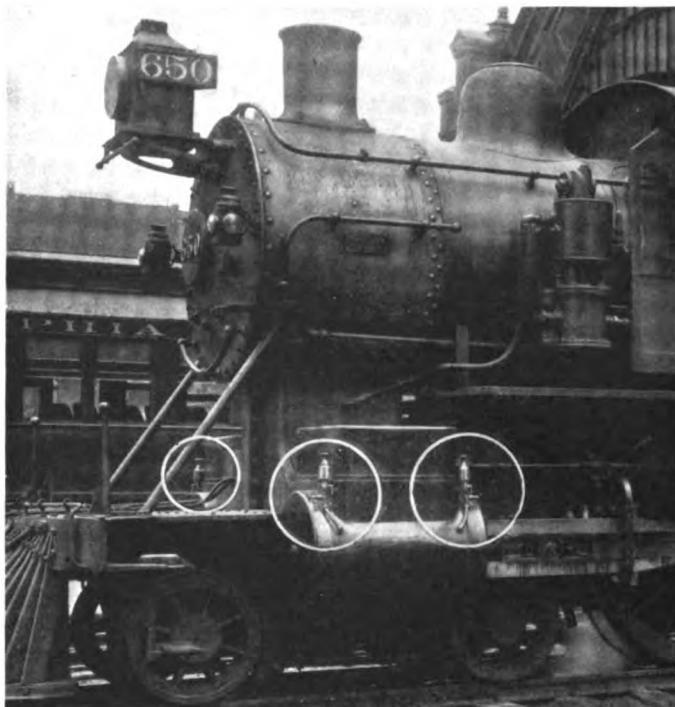
Very truly yours,

(Signed) CAROLYN A. IRWIN,
Principal of East Street Building.

WARREN, MASS., Feb. 4, 1914.

WE GO THROUGH GRAPHITE very carefully each month to find any comments regarding the particular advantages of Dixon's Pencils to stenographers. We are always glad to receive news especially interesting to our readers.

—*Stenographer.*

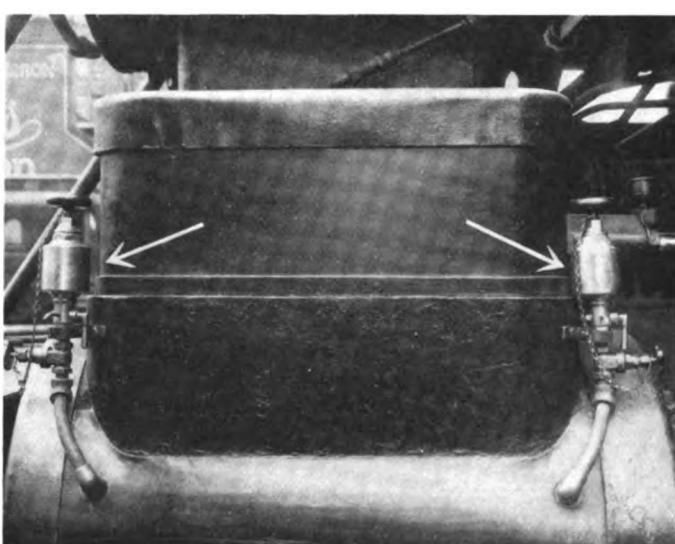


THIS LOCOMOTIVE USES ONLY FLAKE GRAPHITE

The accompanying photographs were taken at the time of installation of a full equipment of the Earley Dry Graphite Lubricator, feeding Dixon's No. 1 Flake Graphite, on an engine operating over the lines of one of the leading railways of the country.

The engineer in charge of the engine made a test running between two given points, distance of fifty-eight miles, using only the No. 1 Dixon Ticonderoga Flake Graphite. He was successful in his test, and even though he was convinced it could be done, he was rather surprised at the perfect action with which the engine operated during these fifty-eight miles without any lubricant but graphite in the cylinders.

The Earley Lubricators have been used quite extensively on stationary engine cylinders, vacuum pumps, air compressors, etc., etc., with admirable results. Not only is maximum lubrication afforded, but the manufacturers of these lubricators guarantee at least a 50% reduction in oil consumption and claim that by the end of a three months' test a considerable saving can be recognized in consumption of fuel.



A HELPFUL HINT



Lead pencil manufacture in the United States is consuming 73,000,000 feet of lumber annually, of which about one-half is estimated to be wasted in sharpening or throwing away short ends. Much of this could be saved by the use of extension holders. Stationers should avail themselves of this information and grasp the opportunity to push the sale of extension holders with every pencil order.

—American Stationer.

A good extension holder for this purpose is Dixon's No. 456. It is four inches long with eraser and handsomely nickelated and is packed one dozen in a box, six boxes in a carton. Prices will be furnished promptly upon inquiry.

**DIXON'S BOILER GRAPHITE OUSTS COMPOUND
CITY AND SUBURBAN RAILWAY CO.**

BRUNSWICK, GA., Feb. 4, 1913.

*Joseph Dixon Crucible Company,
Jersey City, N. J.*

GENTLEMEN:—Answering your inquiry of recent date regarding Dixon's Boiler Graphite, would say we have been using it for about two years. We are pleased to state that we have gotten first class results from its use, first in clearing our boilers of scale and preventing the formation of new scale, thereby getting better evaporation from the same amount of coal.

The water we are using is very bad about scaling our boilers and we use a small amount of boiler compound in addition to the graphite, but since using your boiler graphite we have reduced our compound more than fifty per cent. Will take pleasure in recommending the use of Dixon's Graphite to any plant having trouble with scale in the boilers.

Very truly yours,

(Signed) J. M. ARMSTRONG, Supt.

SIGN YOUR PICTURES WITH A DIXON PENCIL

The other day a man earned \$300,000 for thinking of a new use for his pencil. Incidentally he added an important chapter to the history of photography. With a Dixon Pencil—pen and ink are tabooed—the camera fiend is enabled to have his negative autographed, dated or described at the time of its exposure and to develop the writing as a part of his picture. This inspiration was probably the result of using a Dixon's Anglo-Saxon Pencil. At all stationers.

THOU shalt have no other thoughts than thy work.

Thou shalt not swear, nor lose thy temper when things do not come just right.

Honor thy job and thyself that thy days may be long in employment.

Thou shalt not watch thy neighbor's work, but attend to thine own.

The above are some of the commandments at the Lorain Steel Company's plant at Johnstown, Pa.

GRAPHITE

RACING RECORDS

There are only one hundred and thirty three automobile racing records that have been officially accepted by the contest board of the American Automobile Association. These records include beach, road and speedway events. Over half of these one-hundred-and-thirty-three records are held by racing drivers who use Dixon's Graphite Automobile Lubricants. If all stock car owners could realize the importance of this statement and act upon it, they would never again have occasion to hoist a signal of lubricating distress.

"IN PACKING differential cases with grease," *Gas Energy* says: "It is well to remember that the grease must be thin enough to work in between the teeth of the gears or it will do no good. If the grease is too thick the gear teeth will merely cut a path in it. It is a good plan to use grease that will just flow without being heated in the summer, and a slightly lighter grade in the colder months to offset the natural thickening due to cold. If the grease is too thin it is likely to work along the shafts and get into the brakes."

The Dixon Graphite Greases were made with the above in mind and we know of no grease that will cling to the gear teeth in the manner which the Dixon Graphite Transmission and Differential Grease No. 677 will, and at the same time offer perfect lubrication to the most remote bearing. The grease also contains the correct proportion of Dixon Pure Flake Lubricating Graphite, and as one well known automobilist told us the other day when he used the Dixon Grease he forgot all about having a transmission and differential gear case.



"SELLIN' some paint," said Old Jerry, "is like shovin' th' queer. Some mixtures o' paper an' ink don't come no more to makin' money than some mixtures o' silica an' graphite comes to makin'

**DIXON'S
SILICA-GRAPHITE
PAINT**

Th' dealer who gets phoney graphite paint passed onto him an', generally speakin', is willin' to pass it on to his customers, aint goin' to stand no show with the fellers who get out an' howl for efficiency an' square dealin'."

Write for dealer's proposition and Booklet No. 190-B.

Made in JERSEY CITY, N. J., by the

Joseph Dixon Crucible Company

Established 1827

AUTOMOBILE WHEEL RIMS

The *Goodrich*, published by the B. F. Goodrich Company, Akron, O., is not only an authority on automobile tires but is also able to give some good advice concerning the treatment of rims:

"In winter and in rainy seasons it is a good plan to remove the tires and clean and graphite the rims or use a preparation containing this material. Mix oil and powdered graphite together, making a very thick paste. Next clean the rims, smoothing up any rough places that may exist, and apply the graphite freely. Rub off with a cloth, which will impart a bright finish, leaving a surface that will resist the action of water or moisture, and which will make changing tires an easy matter."

"I RECEIVED two copies of "Useful Spanish Words and Phrases" this morning, and they have created interest in some of the other fellows here. If you can spare me another half dozen, I assure you they will be placed in good hands in our engineering department and "grown up" clerical force."

—OLIVER G. BOYD.

TOO OFTEN

According to the *Washington Star*, Mr. George Ade was sitting with a little girl of eight, who looked up from her Hans Christian Andersen and asked:

"Does m-i-r-a-g-e spell marriage, Mr. Ade?"

"Often, my child," said the cynical bachelor.

—*Youth's Companion*.

IMPROVING ON NATURE

Mary had a little foot,
And, harrowing to tell,
She put it in a smaller boot
And then it hurt like (censored).

—C. M. D.

A SAGE CLERK

The other day a dairy company's clerk was called to the telephone. A woman's voice was heard.

"This is Mrs. Nixon," she said. "I want to know if your cows are contented?"

"Wha-a-t?" asked the amazed clerk.

She repeated the question.

"I see that your rivals advertise that their cows are all contented," said she. "I shall begin to take their milk unless I am assured that your cows are all happy."

The clerk begged her to hold the 'phone a moment. Then he went away and gnawed a corner off his desk. When he got his voice under control he returned to the 'phone.

"I've just been looking up the books, mum," said he, "and I am happy to say we have not received a complaint from a single cow."

"IF THERE are any left, I should appreciate a copy of "Useful Spanish Words and Phrases."

"If this will make conversation as smooth as some of your products do in their respective fields, it must be pretty nearly invaluable."—EDW. J. TOOMEY, Detroit, Mich.

TO Architects, Draughtsmen and Engineers who are sensitive to the slightest variation in the grade of a pencil and to whom the matter is a difference with a distinction, we recommend

DIXON'S

AMERICAN-GRAFITE

**ELDORADO**

as equal in every respect to the finest imported. Dixon's Eldorado Pencil is made in fourteen degrees of hardness, stamped and graded like the imported, hexagon shape, yellow finish. A sample will be sent free upon request to those who mention grade wanted and No. 190-J.

Made in JERSEY CITY, N. J., by the

JOSEPH DIXON CRUCIBLE COMPANY

Don't Help Make Junk of Your Car

Don't let that fatal jinx of the automobile—Friction—cut short the useful days of your car. Remember the moral of the ounce of prevention—get to friction before friction gets to your car. This is the answer—proper lubrication!

Dixon's Graphite Lubricants are the absolute remedy for friction ills, because graphite goes straight to the cause of friction, gets right down to the minute holes and microscopic snags that exist in the most highly polished bearings. Oil or grease only puts a thin film over this roughness. Pressure squeezes out the oil. Heat turns it thin. But Dixon's selected flake graphite completely fills up the tiny holes, smooths over the roughness, makes a hard, oily, veener-like surface that completely eliminates the grinding of the microscopic rasp. Try out a can of

XXX DIXON'S Graphite Grease 677 For Transmissions and Differentials

and you'll quickly learn why winning speed kings, experienced road drivers, and men who drive simply for pleasure, use only Dixon Lubricants. Broken springs, burned-out bearings, broken gears, never bother the Dixon-lubricated car.

Heat or cold won't affect graphite. Pressure makes the graphite-lubricated surface smoother. The more it is used, the finer finish it develops. And Dixon's selected flake graphite is the only graphite that will not pack or ball up, because this peculiar form of graphite *will not adhere to itself*.

It's economical, too. Of course, its price is more than for ordinary grease, but compare your repair charges after six months' use of Dixon Lubricants. Then figure out your depreciation charges. You'll never use any other lubricant after that.

Dixon's Selected Flake Graphite always remains a thin, unctuous, flat flake under all conditions. It always slides, slides, slides over itself. It is the only graphite produced that will not adhere to itself and ball up and pack.

**THE JOSEPH DIXON CRUCIBLE COMPANY
JERSEY CITY, N. J.**

ESTABLISHED IN 1827

Nathaniel

OF THE
UNIVERSITY OF ILLINOIS,
7 DEC 1914

Graphite

Issued in the interest of Nixon's Graphite Productions, and for the purpose of establishing a better understanding in regard to the different forms of Graphite and their respective uses.

Vol. XVI

December, 1914

No. 12



MAIDSTONE APARTMENT BUILDING, PHILADELPHIA

THOS. W. BARLOW, Owner

(See Page 3817)

HENRY L. REINHOLD, Architect

ESTABLISHED 1827



INCORPORATED 1868



JOSEPH DIXON CRUCIBLE CO. JERSEY CITY, N. J., U. S. A.

**Miners, Importers and Manufacturers of Graphite,
Plumbago, Black Lead.**

OFFICERS:

*President—GEORGE T. SMITH
Vice President—GEORGE E. LONG
Secretary—HARRY DAILEY
Treasurer—J. H. SCHERMERHORN
Ass't Sec'y & Ass't Treas.—ALBERT NORRIS*

DIRECTORS:

GEORGE T. SMITH	GEORGE E. LONG
WILLIAM G. BUMSTED	EDWARD L. YOUNG
	HARRY DAILEY
	J. H. SCHERMERHORN

OFFICES AND SALESROOMS

NEW YORK SALESROOM, 68 Reade Street.
PHILADELPHIA SALESROOM, 1020 Arch Street.
SAN FRANCISCO SALESROOM, 155 Second Street.
CHICAGO BRANCH, 1323 to 1327 Monadnock Block.
BOSTON OFFICE, 347 John Hancock Building.
PITTSBURGH OFFICE, Wabash Terminal Building.
ST. LOUIS OFFICE, 501 Victoria Building.
BALTIMORE OFFICE, 616 Professional Building.
BUFFALO OFFICE, 72 Erie County Savings Bank Building.
ATLANTA OFFICE, Fourth National Bank Building.
EUROPEAN AGENTS,
Graphite Products, Ltd.. 218-220 Queen's Road, Battersea, London.
SOUTH AMERICAN AGENT,
Alfredo J. Eichler, 666 Calle Cangallo, Buenos Aires, Argentine.
CUBAN AGENTS,
For all Products Except Dixon's American Graphite Pencils
Croft & Prentiss, Room 424 Lonja del Comercio, Havana.

SWEET SIXTEEN

With this issue GRAPHITE attains the sweet age of sixteen. It has appeared regularly each month and under its own name and its issues have never been consolidated. We feel sure that such a record is unique, if not alone, in the field of house organs. Our gala attire this month is caused, not so much by the advent of Santa Claus, as in celebration of our birth month.

INCORPORATED 1868

DIED—DIRECTOR MURRAY

On November 1, 1914, Mr. William Murray died at his home at Larchmont, New York. Although Mr. Murray had not been in good health for some months, yet he attended the October meeting of the Dixon Company and had the satisfaction and pleasure of meeting the branch managers of the Dixon Company, who were at that time having a conference with President Smith.

Mr. Murray was in the sixty-ninth year of his age and was the oldest director both in years and service, having been elected to the office of director May 16, 1892, succeeding his father, Mr. Chas. H. Murray, who resigned on account of ill health.

Mr. Murray was one of the most prominent yachtsmen along the northern shore of Long Island Sound. For more than forty years he had been a resident of Larchmont. He was one of the founders of the Larchmont Yacht Club, and for a score of years had been its treasurer, and did a great deal to build up that organization. During the last ten years he had lived a retired life, spending his summers at his cottage, the Forecastle, Newport, R. I.

Mr. Murray was a thirty-second degree Mason, and besides being a director of the Joseph Dixon Crucible Company of Jersey City, was director in the New Jersey Title Guarantee & Trust Company of Jersey City, the New York and Stamford Railway Company, the Colonial Life Insurance Company of New Jersey, the Larchmont Water Company, Larchmont National Bank and the American Graphite Company of New York, which is owned by the Joseph Dixon Crucible Company.

Mr. Murray was a member of the Welfare Society and Park Board of Larchmont, the Manhattan, Lambs, New York Athletic, New York Yacht and Horse Shoe Harbor Yacht Clubs.

He leaves his widow, Alice Teneycke Murray, a son, George G. Murray, and a daughter, Mrs. E. M. Dalley.

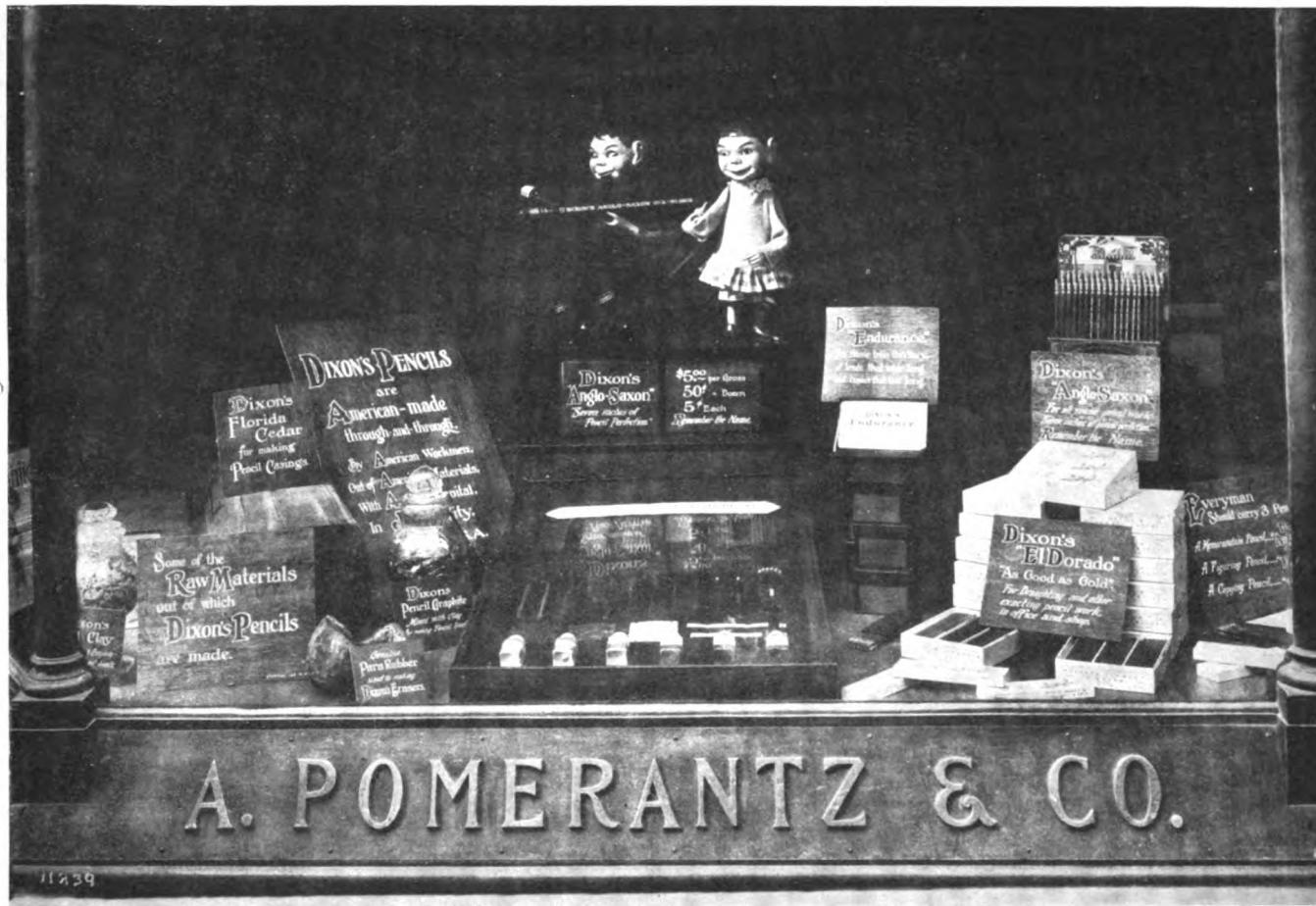
His funeral service was held in St. John's Episcopal Church, Larchmont, where Mr. Murray had been a vestryman for many years. The interment was in Greenwood Cemetery.

HOW FAR WILL A CAR RUN?

"That depends," says *Motor*, "upon the personal care given to lubrication, prompt correction of occurring faults, and good driving. I know of one car that has run over two hundred thousand miles and is still running nicely. I know of another and more expensive machine that almost went to the scrap heap in one year of common driving."

Good drivers seldom neglect lubrication, but too many neglect the warning that "all is not graphite that is black." To prevent the bite of transmission and differential gear teeth, go to the nearest garage and get a can of Dixon's No. 677. Watch the "teeth of friction" disappear beneath a smooth, slick surface of graphite. Know that metal-to-metal contact cannot occur so long as thin, tough, unctuous flakes of graphite continue to fill the minute irregularities that exist in gear teeth.

NO ONE who has ever used Dixon's Graphite Automobile Lubricants would ever attempt to describe the delight that comes from smooth, easy running parts, absence of friction and noise.



**DISPLAY OF DIXON'S PENCILS IN THE WINDOW OF
A. POMERANTZ & COMPANY, PHILADELPHIA**

The firm of A. Pomerantz & Company is one of Philadelphia's leading stationers, and the Dixon Company considers itself fortunate in being accorded the courtesy of a display in the window of such a prominent firm and in such a conspicuous locality.

The criticism of a casual observer will be that the Brownie Boy is sharpening the pencil at the wrong end, and the casual observer may do as others have done—run into the store to tell the proprietors of the sad mistake that they have made in getting up their window display. The Casual Observer will be smilingly invited to go out and take another look. When the Casual Observer arrives out in front of the exhibit again, he will see a card suddenly appear bearing the following:

"Why do you sharpen that end?" inquires the Brownie Girl.

"I'm not," says the Brownie Boy, "I only want them to see the name, Dixon's 'Anglo-Saxon,' which is 'seven inches of pencil perfection.' Remember the name."

During the week of the Convention of The National Stationers' and Manufacturers' Association held in Philadelphia, many stationers throughout the country had their attention arrested by this particular window display and the unique automaton.

As indicated in the picture, there were shown some of the raw materials used in the manufacture of Dixon's Pencils—also a large case showing a number of the stages through which a Dixon Pencil is carried before it reaches the market. There were other signs descriptive of Dixon's Eldorado, which is Spanish for "the gilded one."

Dixon's Eldorado has been for the past few months rapidly taking the place occupied heretofore by high grade imported pencils. It is not surprising to learn that Dixon's Eldorado has been found equal in every respect to the very finest, highest priced imported pencils. This proves the claim so often made, if Americans will only faithfully and without prejudice test goods made in their own country, they will in all probability find them equal or superior to imported products.

NEW COLORED CRAYONS

THE Joseph Dixon Crucible Company of Jersey City, N. J., have just added four new colors to their list of twenty colored crayons which are now made. These four colors are Azure Blue, Purple, Ochre and Light Yellow. The addition of these colors make their list of colors not only chromatically complete, but also well balanced and harmonious both from an artistic as well as a commercial standpoint.

One of the most prominent teachers of art and color in America, in a recent letter to the Dixon Company says: "I congratulate you on having produced some fine, strong colors of marked individuality of hue and purity of tone."

Samples of these new colors, as well as any of the former colors, will be gladly sent to all teachers of drawing and color.

"WE HAVE quite a number of Spanish employed at our works, I find that a great many words and phrases in the Dixon booklet, "Useful Spanish Words and Phrases" will be quite useful to me and I beg to acknowledge my sincere appreciation for the courtesy extended."—JOHN L. ROBINSON.



MR. ALFREDO J. EICHLER

Representative in South America of the Joseph Dixon Crucible Company. 666 Calle Cangallo, Buenos Aires, Argentine

It has taken much time and considerable solicitation to get from Mr. Eichler his photograph and the necessary bit of his history to make up this article. The Dixon Company has been noted for its active, energetic and good looking representatives, but there is none more so than the subject of this sketch.

Mr. Eichler began his business life in 1903 with the Walworth Manufacturing Company, Boston, Mass. The Walworth Manufacturing Company is the only company outside of the Dixon Crucible Company that he has ever worked for.

To learn the business of the Walworth Manufacturing Company thoroughly, Mr. Eichler started in the stock department and later worked in the shipping department, also for a short time in the office. After thoroughly familiarizing himself with the general details of the business he worked as an inside salesman for about a year, and afterwards sold goods in Boston and vicinity. Mr. Eichler was then given charge of the Southern territory, which covered practically all of the Southern States and this territory he looked after for nearly five years. During that time Mr. Eichler made very many pleasant and firm friends and to this day corresponds with a number of them.

The Walworth Company were so well pleased with his salesmanship and the increase of business that he made, that in the year 1912 they asked him to take charge of the South American territory. Mr. Eichler had no desire to go to South America, but being a good soldier he went where his firm believed he was needed and today the Walworth Company are well satisfied with the results.

At the time the Walworth Company decided to send Mr. Eichler to South America, the Dixon Company was invited by the Walworth Company to accept the services of Mr. Eichler in connection with their own. This was done and the arrangement has been found very satisfactory.

The most important American organization in Buenos Aires is the "American Society of the River Plate," of which Mr. Eichler is a member. The society is composed of about 400 Americans. During the year entertainments are arranged by the society, but the main object is to celebrate the Fourth of July, which is usually done by having a banquet followed by a dance at the best hotel in Buenos Aires. At the last one there were about 300 Americans and it was a great success in every way. Mr. Eichler also belongs to other clubs and is, therefore, thoroughly identified with the social life as well as the business life of Buenos Aires.

Following an old time practice of the Joseph Dixon Crucible Company, with which many readers of GRAPHITE may be familiar, we append to this article, a phrenological reading furnished by Fowler & Wells, 18 E. Twenty-second Street, New York. This reading is given entirely from photograph submitted, and we take much pride in reproducing the report in full:

REPORT BY J. A. FOWLER, OF FOWLER & WELLS COMPANY

The photograph of this gentleman indicates that he has a strong individual and scientific type of mind, combined with a wonderfully well balanced physique. Thus he should be able to use his brain more availably than is the case with those people who have mental or physical handicaps. He has remarkable grit and wiriness of constitution, hence he should be able to go through and endure more fatigue than the average man is able to.

His motive, mechanical and executive temperament is well represented in his physique, especially in his broad shoulders, strong muscles and ample chest, while in his head and face this temperament is represented in his width above the ears, his full development over the eyes, and his square, well set nose, long upper lip and square chin.

His mental temperament gives him a practical, analytical, intuitive and persevering mind, and is seen in the width of his forehead and the height of his head above the ears.

His vital, emotional and sympathetic nature is seen in the round chin and the dimple in the center of the same, in the full lips, and in the height of head where the hair parts from the forehead. Thus he has a wonderful combination of mental traits which enables him to show availability of mind and versatility of talent.

The characteristics that seem to stand out most prominently in his organization are—first, his power to analyze material through his large comparison; secondly, his ability to systematize work through his large order; thirdly, his economic foresight which manifests itself through his cautiousness and acquisitiveness ; and fourthly his capacity to size up men, which is a gift that comes to him intuitively through his large human nature. He is also persevering in his efforts, firm and determined in carrying out his opinions and overcoming obstacles, and thoroughly practical in his way of dealing with business matters.

He has a good memory of people, therefore he rarely, if ever, forgets a customer with whom he has done business.

He is a wide-awake man and should know how to turn over business in double quicktime. He can do the work of two men, for while another man is getting ready to work Mr. Eichler will have about completed his bargain and be ready for another job. He does not let the grass grow under his feet, and he is capable of doing well whatever he undertakes to do, for he never begins a thing unless he finishes it—which comparatively few men in the business world today are able to do. He has a masterful mind and can do business much better when his is allowed liberty to act according to his judgment. He is quick to grasp ideas, to reduce facts to a practical basis and to gather the information he wants.

He is to the business world what Bismarck was to Germany. The latter succeeded in uniting Prussia with Germany, and in a young man of Mr. Eichler's type we see one who is able to unite many forces in one, as he is an excellent mixer and will never let an opportunity pass his way without grasping it.

He is a man who, while able to attend to details, should find that his forte lies in large lines of business, and though he is not a great bookworm, as a literary man would be called, he nevertheless should have the science of business at his finger ends.

MILLIONS FOR CHRISTMAS TREES

[Consul George Nicolas Ifft, Nuremberg, Bavaria]

During the week preceding Christmas at least \$2,000,000 was spent for Christmas trees in Germany—probably the sum was much more, even double that figure. In Nuremberg, a city of 360,000 people, 78,000 Christmas trees were offered for sale by 238 dealers, and more than 70,000 of them were sold. This means that practically every household in the city had a Christmas tree. The prices ranged from twelve cents to \$1.25, the average being not less than thirty-five cents. The people of Nuremberg thus spent for their Christmas trees about \$25,000.

The custom of raising a Christmas tree is universal in Germany. I have never known a German home without one. In every city in the Empire a week before Christmas the public squares are given over to the Christmas tree markets and become veritable forests of symmetrical little firs and pines which have been cut from near-by forest reserves. About sixty per cent of the population of Germany dwells in cities, and there are thus 8,000,000 or more families who certainly buy Christmas trees at these markets. Twenty-five cents each is a very low estimate for the average price. Nor does the rural population—the dwellers in villages of less than 2,000 population—go without Christmas trees. While to a large extent they go to the neighboring forests and cut their own trees, they may not do so without paying therefor, and the 5,000,000 or 6,000,000 trees needed to supply them do not cost less than ten to twelve cents each.

Every Christmas tree must also be decorated. Five or ten cents' worth of candles and twenty-five cents' worth of new gilt balls, artificial snow, etc., is the minimum each year, even when the decorations are saved from year to year. Expenditures for decorations often run into much higher figures, but, taking the lowest figures, \$4,000,000 or \$5,000,000 are spent annually for decorations alone. It is safe to say that Christmas trees and their decorations cost the German people not less than \$6,000,000 to \$7,000,000 every year.

THE BIGGEST ITEMS OF EXPORT

The biggest item is raw cotton, amounting in 1913 to more than half a billion dollars.

The next largest item is foodstuffs, amounting to a hundred and seventy-six million dollars.

The third largest item is copper, amounting to over a hundred million dollars.

The fourth largest item is oil—petroleum and its products, amounting in 1913 to forty-nine million dollars.

In 1913 the warring countries bought about twenty-three million dollars worth of our timber and lumber, consisting largely of southern yellow pine.

This information comes to us from the article entitled "Getting Foreign Trade," mentioned elsewhere in this issue.

GRAPHITE DRESS NOW IN STYLE

We would not be surprised if the fashion notes from the Fiji Islands contained something about graphite being adopted as a dress material, but it rather surprises us to read in the *New York Globe* that "many fur cloths are being worn this season, and a tailored suit named Nathalie shows a pleasing use of this material. Graphite caracul cloth was favored, and it was attractively combined with a plain graphite."

THE PENCILS were certainly worth waiting for, as I find that they excel any I have yet tried for taking shorthand and other notes. Hereafter the Dixon Stenographer Pencil for mine.

—FROM A STENOGRAPHER.

Determine the cost of your crucibles by the number of heats you get from them. The crucible that gives a greater number of heats brings a satisfaction that is worth more than a slight difference in price.

DIXON'S CRUCIBLES

are used where results are considered as more important than time lost and material wasted. May we send you "Crucibles, Their Care and Use." Please mention No. 190-A.

Joseph Dixon Crucible Co.
JERSEY CITY, N. J.



MR. SAM MAYER**In Memoriam**

At the Tenth Annual Convention of the National Association of Stationers held at Philadelphia in October, Hon. James A. Logan of Worcester, Massachusetts, delivered the following memoriam for Mr. Sam Mayer, late manager of the Chicago Branch of the Joseph Dixon Crucible Company. Previous to the introduction of the speaker the president said:

"In the month of April last, Mr. Sam Mayer, of Chicago, our good friend and dear companion, passed away after an illness of some duration. His death will be the subject of an appropriate resolution to form a portion of the records of this convention, but his part in the upbuilding of our association was so unique and so distinguished, and is so strongly brought to mind by our very gathering together here today without him, that mention of him in this report was not to be denied."

Following his introduction Mr. Logan spoke as follows:

"Mr. Toastmaster, Your Honor, the Mayor, Invited Guests, Ladies and Members of the Convention! Tomorrow our meetings will come to a close, and we shall spread to go to our homes once more, to take up the ordinary ongoing of our lives. We shall not have gotten the highest and best good from our gathering if we do not take with us some thoughts on the more serious things of life. Since we met at Springfield, a year ago, death has been busy, and a number of our members have ended their work with us here, and we shall meet them no more on this side of the Great Divide. I would speak of one, our friend Sam Mayer, whose genial, smiling face we shall miss, and whose hearty greeting will be ours now only as a memory of the past. I am not a believer in, and this is not the time or the place for fulsome eulogy, and that would be the last thing that the man of whom I am about to speak would wish. The desire to be remembered, beyond this short span of life, is a real and persistent one, but to be held in close and loving remembrance in this too forgetful world by those with whom we have been associated is one of the richest compensations of life. To quote from a recent writer, "It would rob death of half its sting to be assured that daily your face would live before the vision of faithful hearts, and your memory, with redeeming faults as well as some excellencies, be kept green by unchanging affection." And this, I believe, would express our friend's highest wish, that he be not forgotten. In the popular mind the great man is bold, haughty, stern, self-centered and self-reliant. If these only are great, then this term may not be applied to our friend, for he was a modest man. Some one has well said, and truly said, that true greatness, after all, in spite of its name, is not so much a certain size as a certain quality in human lives; and, measured by that standard, our friend Mayer was great. He had that certain quality of mind and heart which called out the love and affection of those with whom he was associated. Personal influence, after all, makes a more lasting impression than personal effort. Effort is assertive; influence is persuasive. Earnest endeavor in right directions is the best that most well meaning men can do, but the steady influence of a good character in the long run counts for more; and this influence is quite unconsciously absorbed by others. The seed of influence, sown in a few furrows at times of which no one is conscious, not even the sower himself, springs up and bears its harvest as a memorial of one who once passed that way. No other memorial

compares in beauty or permanence with the impression that is left on other lives, and with the affection which goes with that impression. It sometimes happens that we live so near to a real fine life that we utterly fail to appreciate it at its true value. We can be so near to it that we do not get the proper perspective, and so we are hardly conscious of its influence; but that, after all, constitutes its greatest power, that we are not conscious of its molding and refining influence on us; but when death comes, with its wonderful silence, and all the jarring voices of earth are hushed, then, and then only, can a correct estimate be made of the true value of a good and forceful life, which having passed through the fire, the dross has vanished, and only the pure gold of life remains. May I give you a thought from an address of our Senator, Henry Cabot Lodge—I do not quote his exact words, but shall try to give you his thought. "When we approach the end of life, and those in the front ranks drop out, as we know they all must, and we come within sight of the eternal rifle pits beyond, as we know we all must, it matters not what may have been our means or our success, the really precious things of life that have a permanent and abiding value are the loves and the friendships made on the journey." The really permanent things of life are not, after all, the material things which can be seen and handled. There are things of more real value even than money, which is the measure of so many earthly possessions. There are things which money cannot buy, and which death cannot take away, and in those possessions our friend Mayer was rich. In the humble home of the Scottish peasant every cottage has at least two rooms—the kitchen, where the work is done, and that is called the 'butt,' and to that room all kinds of people come. Then there is an inner room, which has the family treasures, like the Bible, the grandfather's clock, the chest or drawers, and other family treasures, and that is called the "bin," and to that room none but the favored few have entrance. So in the life of each one of us there is a butt and a bin; the butt where we meet, as we do here, in the crowd; and the bin, or inner circle of our friendships, where only the privileged few are permitted to enter. Into the bin or inner life of our friend I was once admitted, and now that he is gone I do not feel that it will be a breach of confidence if I repeat to you what he told me. We were friends for many years, and this was told me many years ago. His people were not favored with a large store of this world's goods, and early in life he had to earn his own living and also help the family. Out of his modest earnings his mother gave him each day ten cents with which to buy a lunch at the noon hour. Other boys of his acquaintance who were older, and who were earning more, could afford to spend more, but he could not. His work, if I remember correctly, was in a broker's office, and it sometimes happened that there would pass through his hands in a day \$40,000 or \$50,000. While handling these large sums of money, and receiving so little himself, he chafed under his limited means. One morning he was sent to the bank by his employer to draw the cash on a check for \$385. The paying teller transposed the figures and paid him \$835—\$450 too much. Sam noticed the error, but took the money, went away by himself, counted out the amount overpaid and put it in his pocket, intending to keep it. With this money he could be like the other young men. All day long this money burned in his pocket until he could no longer stand it, and

after the bank had closed he went to his employer, told him the whole story, and laid the \$450 on his desk. His employer got up, put his arm around him and said: "Sam, you were sorely tempted, but you are an honest boy. Let us go over to the bank." When they reached the bank they found the young teller, as Sam expressed it, "sweating blood," and the whole story was told to him, the money paid back, and both young men went home happy. In giving me this chapter from his inner life Sam said: "I was just at the fork of the road that morning, but when I thought of my mother, of her love for me and of my love for her, that kept me on the course, and I am what I am because she loved me so that she kept me straight." Do you wonder he so often referred to his mother as his sweetheart. Happy the man who, reaching the end of life, has kept faith with himself and with his mother, and proves himself to be the kind of a man his mother prayed he might become, and such a man was our friend Mayer."

EUROPEAN WAR AND FOREIGN TRADE

To quote from the *Saturday Evening Post*, Europe is the great market for our exports, both raw and manufactured.

To the countries now at war we export more than twelve hundred million dollars of goods yearly, or about half our total exports.

The war means a loss of an important part of this business.

Germany and Austria-Hungary alone normally buy more than three hundred and fifty million dollars of American goods yearly.

Our trade with those countries virtually ceased with the declaration of war.

The United Kingdom bought six hundred million dollars of our goods last year. A considerable portion of this trade will be impaired.

The first fact the United States has to face is loss of business in our best market.

In all foreign-trade talk we hear a great deal about Central America and South America.

We face a big hole in our foreign trade and the immediate problem is how to fill it up.

Set down the figure fifteen. That roughly represents our sales of goods to Europe.

Then set down the figure six. That represents our sales to North America, mainly Canada.

Then set down one and a half. That represents our sales to South America.

One and a quarter represents our sales to Asia.

Another one and a quarter represents our sales to Oceania and Africa.

These figures foot up twenty-five, and twenty-five hundred million dollars is roughly the sum of our total foreign sales.

The hole occurs in the European market, represented by the figure fifteen.

To fill it up we first turn to South America, represented by the figure one and a half—or, in other words, where our sales are one tenth those to Europe.

For many years our comparatively poor showing in South American trade has been considered a national reproach. We are a little nearer to that market than England and Germany are. For almost a century we have exercised a sort of political guardianship over the southern half of this hemisphere.

We ought to get the bulk of the trade there, it is said, but we don't. Moreover, we buy from South America much more than South America buys from us. By far the greater part of our trade there is with three countries—Argentine, Brazil and Chile.

England, Germany and France have supplied the capital of South America. It has been estimated that in seven years, ending with 1913, Great Britain supplied Argentine with nearly six hundred million dollars of capital for developments; Brazil with four hundred and forty million dollars; Chile and other South American countries with nearly a quarter of a billion. Total British investment in South America is reckoned at about three billion dollars. Germany and France also have supplied large sums.

This means that for many years Great Britain, and latterly Germany, has been selling goods to South America and investing a considerable part of the purchase price down there. It is like selling goods to a farmer and taking a mortgage on his farm for a part of the bill.

The article "Getting Foreign Trade," published in the *Saturday Evening Post* of October 24, 1914, is well worth careful reading by those interested in foreign trade.

"GOLD MINE" IN GRAPHITE

Mr. F. B. Gibbs, of the Dixon staff in Chicago, writes as follows:

"On a recent trip to Duluth, Minn., Mr. T. J. Walsh related his experience with graphite. At the present time he has under test a car load from a forty foot vein of graphite, containing anywhere from \$5.00 to \$10.00 a ton of pure gold. The graphite is of the amorphous variety and contains a small amount of iron pyrites. To the writer, this condition seems remarkable, as the graphite is of a fair quality and the gold exceptional. This party might well say he has a 'gold mine' in graphite."

THE man who drives
for pleasure can
keep his car running
smoothly and at low cost
by using

DIXON'S Graphite Grease 677

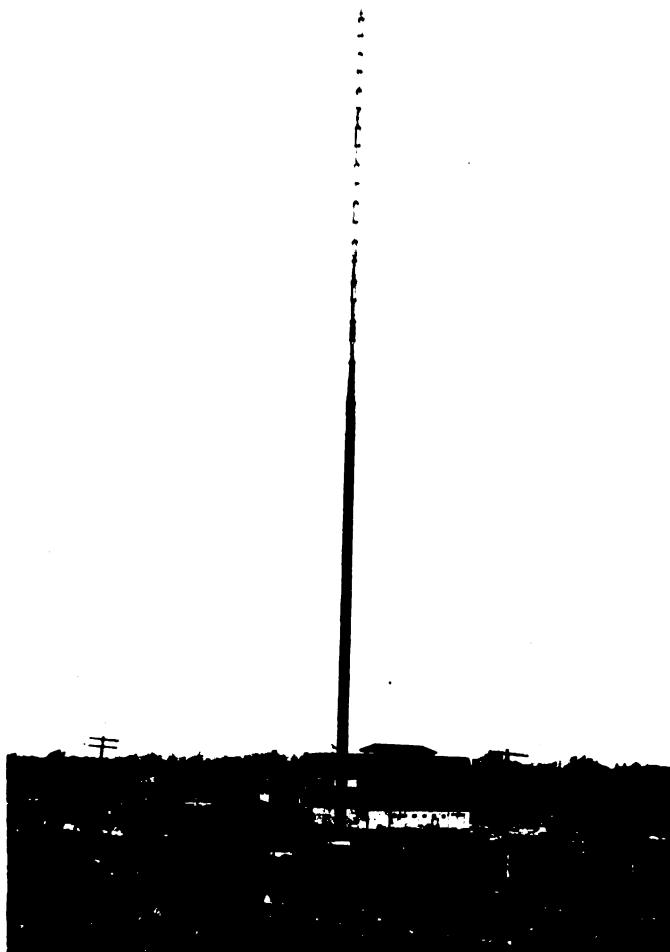
For Transmissions
and Differentials

It reduces friction to a
mere nothing, and gives his
car longer life, greater mile-
age and cuts repair bills in
half.

*Write for the Dixon
Lubricating Chart. You
will find it useful.*

Made by
THE JOSEPH DIXON CRUCIBLE CO.
JERSEY CITY, N. J.

 Established in 1827 



MARCONI WIRELESS MASTS

Use Dixon's Silica-Graphite Paint

The J. G. White Engineering Corporation of New York City, designers and erectors, have recently completed the erection of a number of steel composite cylinder type masts at New Brunswick, N. J., for the Marconi Wireless Telegraph Company of America. We illustrate one of these masts. They were all protected with the *longest service* metal protector—Dixon's Silica-Graphite Paint.

As the wireless is now occupying so much attention in the world's news, we give you the following technical description of a wireless station, which information was furnished us by the J. G. White Engineering Corporation:

"Wireless stations are located in pairs, a receiving and sending station, situated, however, thirty miles apart, so that the incoming and outgoing messages will not interfere with each other.

"The masts are constructed to a height of approximately 425 feet. There are from ten to thirteen masts at each station, arranged in a great semi-circle covering a square mile. Each mast has a hollow cylindrical portion forty-two inches in diameter, made up of quarter sections to a height of 194 feet, and thirty inches in diameter, made up of half sections up to a height of 400 feet. Above that height it consists of a single

pine timber. The lower part of the steel portion is composed of quarter-cylinders fifteen feet long, bolted together through vertical and horizontal flanges. The upper part is made up of semi-cylindrical sections, ten feet long. The mast is seated on horizontal 7 x 7 feet steel foundation plates connected by eight two inch vertical bolts, seventy-eight inches long and buried in a twelve foot cube of concrete, made of one part Portland cement and six parts aggregate. The mast is secured by four sets of guys, each set consisting of eight three inch flexible galvanized crucible steel wire ropes shackled to the mast and to a U-bolt, engaging a steel anchor plate, buried in a twelve foot concrete cube.

"The method of erecting these masts consists of sectional construction without scaffolding. The erection cage or basket, from which the construction work was done, is about ten feet square and inclosed by a railing three feet high."

LATIN-AMERICA

Very few people in the United States have any real conception of Latin-America. By Latin-America we refer to Mexico, Central America, South America and the West Indies—at least to that portion of those countries where the Spanish or Portuguese languages are spoken.

Portuguese is the language of that vast territory known as Brazil. Few people will believe, without looking it up, that Brazil is large enough to easily contain both the United States and the German Empire.

English and German manufacturers, through their representatives, know South America far better than we do and have had the greater portion of business in South America. We do not even give thought to the fact that when we are having mid-summer in the United States, in South America they are having mid-winter.

South America is a country of wonderful possibilities, as it is of wonderful scenic beauty.

Probably every South American knows of the existence of Niagara, but very few people in the United States know anything of Niagara's alluring mate, which is half Brazilian and half Argentine. Niagara's height varies from 158 to 169 feet. Its width in greatest contour, including Goat Island, being 4,770 feet.

The wonderful falls of Iguazu have a contour of nearly 10,000 feet. In time of low water the semi-circular falls are broken into 275 distinct cascades, separated by a maze of verdure. The largest, which unites Argentine and Brazilian territory, has a sheer drop of 213 feet.

Probably only those who subscribe to the bulletins of the Pan-American Union can get a comprehensive and up-to-date understanding of the wonders, the beauties and the commercial possibilities of Latin-America.

As something in the way of a help to those who are not familiar with the Spanish language, we have published a little booklet of "Useful Spanish Words and Phrases." It is in no sense a treatise on the language and is more particularly intended as an aid to tourists and travelers who wish to acquire the pronunciation of enough words and phrases to make known their wants in Spanish. A copy of this booklet is sent free upon request to any reader of GRAPHITE.

DIXON'S graphite publications sent free upon request.

FROM THE FIRE ENGINEER



ICE HOUSE, MACMAHON ISLAND, MAINE

The accompanying illustration shows an ice house at MacMahon Island, Me., on which Dixon's Silica-Graphite Paint, Olive Green, has given excellent service for the past twelve years. The paint today appears to be in as good condition as when applied. There is no peeling or cracking and the woodwork remains perfectly protected. The Olive Green shade blends harmoniously with the evergreen surroundings. The color is most desirable on large structures which might be unnecessarily conspicuous and unattractive if lighter colors were used.

The ice house shown faces the open ocean and is subjected to all the severe conditions that exist near the sea.

PAINT PROTECTION OF RENDERING TANKS

About two years ago, the Dixon Company received an order from the largest packing company in Ontario, Canada, for a quantity of Dixon's Silica-Graphite Paint for protection of their rendering tanks. The packing company did not hesitate to say that they had never been able to find a protective paint that would last on their tanks for six months and that if Dixon's Paint proved satisfactory they would reorder in due time.

Now after two years' time we have received a repeat order for a quantity of this *longest service* paint to repaint their tanks, it having successfully withstood all destructive agencies for two years, against six months' service for the best paint they had been able to find previously.

"I HAVE just organized a class in Spanish made up of teachers both grade and high school, and I shall be very glad indeed to receive twenty-one copies of the Dixon booklet, "Useful Spanish Words and Phrases."—*From a School Superintendent.*

Great folks, the Joseph Dixon Crucible Company, of Jersey City, N. J., U. S. A. The founder of the great corporation was Joseph Dixon, who left upon his company the firm and lasting impress of himself and the characteristics of him are today the exact characteristics of the company he established, progressive, earnest, honest, absolutely dependable. In the offices of the *Fire Engineer* Dixon's Pencils are the favorite. From some sources we learn of the high value of Dixon's Boiler Graphite; from others of Dixon's Belt Dressing; from still others, manufacturers and engineers, of Dixon's Silica-Graphite Paint; from owners and drivers, of Dixon's Flake Graphite as a lubricant for all sorts of bearings, and not one of them but says, and says loudly, that each of these is of the very best. Praise like this is beyond price because it is compelled by service, an unconscious tribute to merit proven in the crucible of results.

Crucible? Why, the Joseph Dixon Crucible Company is itself a crucible, a crucible in which men and methods and products meet their highest tests and come out clean and true.

Not only is the Dixon Company of the very élite of manufacturers and employers, but it aims to be a useful citizen and doesn't miss its aim, in this case either, by a hair's breadth.

Just now, when the trade of Central and South America is so alluringly opening to us, what could be more timely and welcome than a list of Spanish words and phrases and their meanings? And just such a list the Joseph Dixon Crucible Company issues with its compliments to all its hosts of friends. "Useful Spanish Words and Phrases," a little booklet most attractively gotten up and in the very nick of time. Send for one to the Dixon Company, or, if you prefer, the *Fire Engineer* will undertake to have one sent to you.—*Fire Engineer.*

• MAIDSTONE APARTMENTS, PHILADELPHIA

Our cover illustration shows the fashionable, centrally located Maidstone Apartments, 1327 Spruce Street, Philadelphia.

The architect is the well known Mr. Henry L. Reinhold; the steel contractors, the American Bridge Company; and the general contractors, J. G. Doak & Company.

We are pleased to say that two coats of Dixon's Silica-Graphite Paint were applied to the steel work.

The owner of this handsome apartment is Mr. T. W. Barlow, under whose popular ownership this fashionable hostelry is a great success.

The Maidstone Apartment is a modern, fireproof building, ten stories high, and contains twenty-seven elegant house-keeping apartments, and six suites of professional offices.

AMERICAN MANUFACTURERS EXPORT ASSOCIATION

66 Broadway, New York. E. V. Douglass, Sec'y.

An association of American manufacturers formed for the common purpose of advancing the foreign business of American manufacturers. An association to which every American manufacturer should for his own good belong. The dues are very small, the benefits are very great.

CUTTING ADVERTISING COSTS

Curiously enough, advertising with many concerns seems to be the first thing to be cut in times of depression.

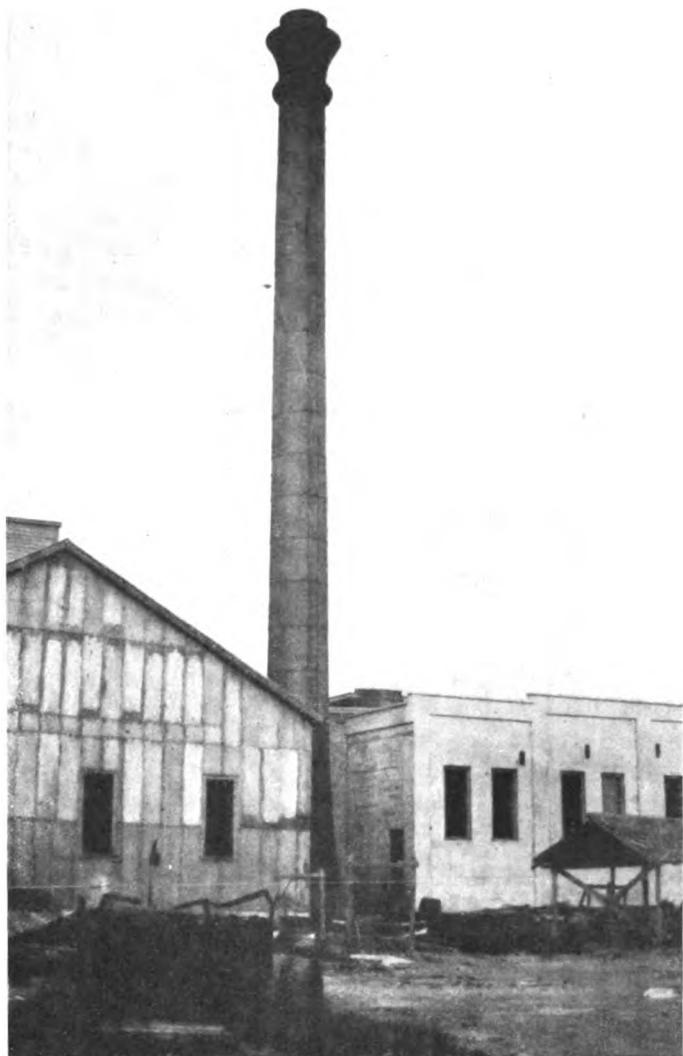
The advertising man of the concern and the advertising agent who places the concern's advertising very largely, are unable to successfully impress upon the concern the necessity of persistent advertising even in times of greatest depression.

That advertising should be the first thing to suffer a cut is unfortunate, but only natural. A manufacturer dislikes to lay off his salesman or his factory people. He sees the individuals themselves, and their wives and children, who are bound to suffer if they are thrown out of employment. Moreover, when once a man is lost, it may be impossible to get him back again when he is wanted. Not so with advertising space, however. It is quite impersonal—to the advertiser—and he knows that if he drops out of a medium today he will be welcomed back with open arms whenever he says the word.

If retrenchment is necessary, it is only natural that it should be first made where it will cause the least personal inconvenience to the organization.

Thus states *Printers' Ink*, which adds that if a concern reaps its business and profits largely from advertising it is likely to follow the example of the American Tobacco Company, which discontinued its advertising at the outbreak of the war, but a few weeks later reinstated the campaign in full force.

Advertising that carries the name of a concern throughout the land; advertising that makes the goods manufactured by that concern household words throughout the land; advertising that makes people ask for that particular concern's goods, is something that that concern cannot afford to drop, and if advertising does all that we have mentioned, that advertising is something not only to be continued for a time but for all time, and if it successfully does all that we say in a certain section, it can most profitably be extended until the capacity of the concern is so taxed that additions to the factory must be made.



A STRONG TESTIMONIAL

The above illustration shows the plant of the Consumers Ice and Cold Storage Company of Key West, Fla., one of the leading concerns of its kind in the South.

As the island situation is exposed to conditions of heat, moisture and high winds at times, we are highly gratified to print the following testimonial:

"In June, 1910, after a severe hurricane which stripped our smokestack of paint and rusted it quite badly, we painted same with two coats of Dixon's Silica-Graphite Paint, which is still in place, and has withstood the storms and weather ever since.

"From the present indications, the smokestack will not need repainting for at least two years, and we are very much pleased with the results obtained from the use of Dixon's Silica-Graphite Paint."

THE MARK OF PENCIL QUALITY

A magnifying glass, which may be attached to the pencil, is a new device for the convenience of draughtsmen.—*News Item*.

Which may prove that the mark of quality in some pencils is almost invisible.

GRAPHITE IS WELCOME

"GRAPHITE maintains its brightness and originality unimpaired. There is just enough of the matter of fact to relieve of monotony that crisp and the odd and the quaint which so generously bestrews its pages.

"GRAPHITE is always a welcome visitant at the office of even the busy business man. It contains both meat and sparkle, enough sparkle to be radiant."—*American Contractor*.

THE *American Stationer* advises its readers that the warning against Canadians dealing with German or Austrian firms has been renewed, and the Canadian public has been reminded that dealing with German or Austrian firms is an offense punishable by from three to seven years of penal servitude.

The *American Stationer* further states that it is reported that certain firms in the United States have been attempting to sell in Canada various lines of German or Austrian paper and paper specialties, as well as a wide range of other goods, and that the Department of Customs has issued stringent instructions to the customs officers to be on the lookout for goods of this character, and that all German made goods that passes the international boundary will be confiscated.

THREE BANKS AND DIXON'S GIVE FREE INSURANCE

Each Employe Given a Policy Equal to Year's Salary and Paid Up for One Year. All Placed in the Colonial Life

The First National Bank, New Jersey Title Guarantee and Trust Company, the Joseph Dixon Crucible Company, all of Jersey City, and the West New York Trust Company of West New York, have just effected an arrangement with the Colonial Life Insurance Company of Jersey City for the insurance of all the employés of the four above mentioned companies.

This insurance covers about 350 employés, and each employé receives a policy for the amount of a year's salary, said policy being issued to cover one year. Each employé has the right of naming his or her beneficiary, and in the event of death of anyone of these 350 employés those dependent upon them are assured of a year's salary being promptly paid in full.

This insurance is paid for by the employing companies and the employés do not have to worry about the premiums being paid. As this insurance is without expense to the insured, it is needless to say that the employés of these companies are delighted and that they are loud in their praise of this policy on the part of the employing companies, which the employés say is in line with the most progressive policy of all leading industrial concerns.—*Jersey Journal*.

The insurance carried by the Dixon Company is for its employés at the general offices in Jersey City, factory superintendents and branch offices, including salesmen.

OLDFIELD, THE "MASTER DRIVER OF THE WORLD"

This is the title which Barney Oldfield, the veteran automobile pilot, is now privileged to use. It is the title each year accorded to the winner of the Los Angeles-Phoenix Race, which is known to the automobile world as the "Great Desert Classic." After three days of hard driving over speedway, desert, mountain and unbridged streams, Oldfield succeeded in winning the Seventh Annual Los Angeles-Phoenix Race, covering the 673 miles in better time than the other ten of the twenty original starters who finished in the race. The race was run in three spurts or heats, each of which was considered a day's run. The first spurt was run from Los Angeles to Needles, Cal., the second spurt from Needles to Prescott, Ariz., and the third spurt was from Prescott to Phoenix.

Louis Nikrent, who, after a previous race won at Santa Monica said: "It is my intention to use Dixon Graphite Automobile Lubricants in all my future races," finished before Oldfield, but lost on account of elapsed time.

Following Oldfield to the finish by about one minute came T. J. Beaudet, who will long be remembered as the driver of the famous Sand Digger car in its 3000 mile trip from Los Angeles to Mexico City. In the Los Angeles-Phoenix Race, as in his famous trip through Mexico, Beaudet lubricated his car throughout with Dixon's Graphite Automobile Lubricants.

During the race, Oldfield was obliged to drag his car out of the swollen Agua Fria River with a team of horses, and other hardships with which he had to contend proved not only his ability as one of the world's greatest racing drivers, but also his good judgment in saying after his first use of Dixon's

Graphite Automobile Lubricants: "I have never before experienced the sense of safety and lubrication surety that I felt today."

For GRAPHITE readers interested in automobile racing, we have published a little folder "Words of Wisdom from the Speed Kings of Motordom." We shall be very glad to send this folder upon request.

ANOTHER GOOD WORD FOR DIXON'S BOILER GRAPHITE

GEO. M. COHAN'S OPERA HOUSE

CHICAGO, April 1, 1914.

Joseph Dixon Crucible Company,

Jersey City, N. J.

GENTLEMEN:—We wish to advise that we have used Dixon's Flake Boiler Graphite in our boilers for the past three months and find that it is very good for the purpose. It has removed nearly all the old scale and we find it considerable easier to prevent new scale from forming.

We can highly recommend it to anyone having scale trouble.

Yours truly,

EDW. E. KLUGE,
Chief Engineer.

"WILL YOU please send one copy of "Useful Spanish Words and Phrases" for each of our high school teachers?"

—*From a School Superintendent.*

Introducing D.B.G. to

boilers is good engineering practice, for experience urges a careful consideration of the form and grade of graphite to be used. For eighty-seven years we have had at our command all forms and grades of graphite, and therefore have no incentive to use or recommend other than the correct grade of

DIXON'S Boiler Graphite

It reduces fuel consumption, prevents the hardening of scale, gives to the surface of the boilers a smooth polish, prevents pitting and makes the removal of scale easy by a gentle, mechanical action.

Ask for a copy of "Graphite for the Boiler."

Joseph Dixon Crucible Co.

Makers of Crucibles, Pencils, Paint, Lubricants
and other Graphite Products.



JERSEY CITY, N. J.

Established
1827

SPEED KINGS WHO USE DIXON'S



GRAPHITE AUTOMOBILE LUBRICANTS

UNIVERSITY OF ILLINOIS-URBANA



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